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Serving Career Development Professionals Since 1979

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HOW WE WILL WORK IN THE FUTURE

**Steven Beasley, Guest Editor & Editor Emeritus
Ann Nakaska, Guest Editor**

This journal is dedicated to Steven Beasley who was the Managing Editor of this journal for over 20 years and who passed away July 3, 2021.

Part 1

Impact of Technology on The Workplace

Part 2

Working In The Fourth Industrial Revolution

Part 3

How Career Practitioners Will Work in The Future

CAREER DEVELOPMENT NETWORK JOURNAL

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HOW CAREER PRACTITIONERS WILL WORK IN THE FUTURE

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INTRODUCTION AND OVERVIEW: HOW WE WILL WORK IN THE FUTURE

INTRODUCTION: ADVANCED MANUFACTURING AND THE FACTORY OF THE FUTURE: A METAPHOR FOR THIS JOURNAL

By Steven Beasley with Ann Nakaska

When I worked on a factory floor, line supervisors emphasized speed, accuracy, and quality. Promotions were made by virtue of your contribution to process or product improvement, as well as by the above three measurements. We worked a full eight-hour shift. -Steven Beasley

What has changed? How has change affected the average worker? What do we as career development practitioners need to understand?

Technology is impacting many areas of the workplace. To understand the rapid acceleration of change involved in advanced manufacturing, for example, we need to know what it is, its wide scope, and its comprehensiveness. Then we can better project what may become the factory of the future, and we will begin to comprehend the full impact on the worker. It is the same with all other areas of the workplace.

This journal attempts to encompass the changes that are coming to the workplace of the future. It started with a vision to do a five-year follow-up journal issue on How We Will Work in the Future. Deciding what information would be covered in this journal was an enormous task. We brainstormed article ideas that we thought crucial for career practitioners and their clients to be successful in the future, not just post-pandemic but for at least the next decade. Like advanced manufacturing, we were thinking in terms of the wider scope and the comprehensiveness.

To have a wider scope, it was important that the journal articles were written not only by long-time, established career practitioners but also by new, up-and-coming practitioners, a wide variety of academics, and industry leaders working with some of the top corporations in North America. Moving forward, practitioners will need to educate clients, helping them get ready for the changing world of work, not only on labor market information but also on upcoming trends within post-secondary schools, in the broader workplace, and in the field of career development.

Many well-known practitioners contributed, but we also asked young, new authors to share their work and their perspectives. Lastly, we asked practitioners working in countries around the globe to add to and broaden our global view of career development. There were so many topics we wanted to cover but could not. There was simply too much material, too much to cover. In the end we focused on three major areas:

- the impact of technology on the workplace
- working in the fourth industrial revolution
- how career practitioners will work in the future

I have been fascinated with learning about factories of the future, not just in North America but in other countries, such as China, for an awfully long time. Advanced manufacturing, a major

part of factories of the future, can be defined as the use of innovative technology to improve products or processes. The technology itself is often described as advanced, innovative, or cutting edge. Organizations involved in advanced manufacturing will integrate these new technologies in both products and processes.

Our hope is that this journal will do the same for the career development profession. We hope that it will inspire practitioners to improve products and processes to better serve their clients. “Advanced manufacturing will sometimes entail the rapid transfer of science and technology into manufacturing products and processes” (Advanced Manufacturing, 2020). We have the opportunity as practitioners to do the same with our practices. We can build on the science readily available and decide how we as practitioners want to incorporate technology into our services.

Wikipedia highlights the characteristics of advanced manufacturing products as:

products with high levels of design, technologically complex, innovative, reliable, affordable, and available, newer, better, more exciting, products that solve a variety of problems, flexibility (“Advanced Manufacturing,” 2020)

These sound like some of the characteristics we want career practitioners to bring to their practices of the future. How will we create services for our clients that are more reliable, affordable, and available? How can we provide our clients with newer, better, and more exciting programs? How can our profession be more innovative? We need to understand the wider scope of the workplace of the future.

Advanced manufacturing can also be described in terms of:

- traditional versus advanced
- success
- research and development
- dynamic nature

When we compare traditional versus advanced manufacturing, the difference lies in how advanced manufacturing also examines society’s overall interests. As practitioners, we also need to consider society’s overall interests. The following articles in this issue help us address some of those interests:

- Dr. Jackie Peila-Shuster shares her expertise on helping mid-to-late career adults navigating the future.
- Whitney Erby, Camille Smith, Alexander Davila, along with Dr. David Blustein, grace us with their wisdom on racism and the future of work.
- The Global Career Guy, Dr. Brian Hutchinson, provides us with a thought-provoking overarching piece on global career development as an introduction to four international career development articles:

-
- Qualandria Brookens, Khyati Verma and Obianuju Orijoke examine work being done in Nigeria, India, and Uganda.
 - Dr. Timothy Hsi shares career development practices in Singapore.
 - Martha Canji and Laurie Carlson elaborate on career development work being done in North America.
 - Alberto Puertas and Amilkar Brunal share multiple perspectives on a wide variety of work being done in Central and South America.

When we think about success, we need to think about the unique ability to create a competitive advantage in the current environment. To have a competitive advantage, practitioners must understand the global economy, the world around them, and technological advancements. Five articles address these issues:

- Charles Lehman explores how automation is impacting the job market.
- Mason Murphy shares real world voices on how technology is impacting blue collar trades and services, a topic not often covered in fourth industrial revolution discussions.
- Ann Nakaska fills in with articles on augmented reality and virtual reality and its impact on training and education in the workplace, and an article on the impact of technology on the human services sectors.
- Rod McCloy and Betsy Willis identify how we will fill the skills gap in STEM careers.
- Dr. Debra Osborn, Dr. Casey Dozier, and Tristen Hayatt provide technical expertise on how practitioners will be trained in this virtual world.

Just as aggressive research and development is part of the very definition of advanced manufacturing, as practitioners we need to think about how we will use the research and development to help our practices thrive in the future.

“Finally, several sources point out that any definition of advanced manufacturing will need to change with the changing times, and that the definition will vary for different companies and different industries” (“Advanced Manufacturing,” 2020). This means that as practitioners, we also need to think about how we will change with changing times. To help us and our clients continue to do great work in changing times, the following practitioners shared their expertise:

- Dr. William Huffaker and Anitah Gombos identify how we will need to reskill the industry leaders of tomorrow.
- Dr. Sarah Eaton, a leader in her field, shares her knowledge on academic integrity and counterfeit credentials.
- Kelley Steven Waiss and Edie Goldberg, authors of *The Inside Gig: How Sharing Untapped Talent Across Boundaries Unleashes Organizational Capacity*, share their knowledge on how the gig economy is being used inside organizations, and Kelley Steven Waiss also shares how HR leaders will need to act as supply chain talent managers.

-
- The Futureproof Workplace authors Morag Barrett and Dr. Linda Sharkey, along with Lou Carter, provide insights into how employers and employees will need to adapt to the post pandemic and changing workplace.
 - Social media expert Dr. Nancy Richmond shares her knowledge on how social media can be used effectively within organizations.
 - Ann Nakaska adds an article on what our clients can expect in the office of the future.
 - Kate Brooks explores job search in the fourth industrial revolution, based on Dick Bolles work, What Color is Your Parachute?.
 - Jenn Long Leard shares her knowledge on how we can reinvent career services for the fourth industrial revolution.
 - Dr. Rich Feller wraps up the journal with wisdom on how we can move forward through the fourth industrial revolution with new skills while continuing to honour those who came before us, with a tribute to the legacy of Dick Bolles.

The frontier of manufacturing is constantly changing. This journal hopes to be part of the new frontier of career development, “changing in response to the needs” (“Advanced Manufacturing,” 2020) of the client.

Most definitions of advanced manufacturing “include the use of innovative technology to improve products and/or processes and may also include the use of new business/management methodologies” (“Advanced Manufacturing,” 2020).

Just as I have been fascinated with advanced manufacturing and the factories of the future for many years, I have also been involved in and interested in the field of career development.

This journal reflects how moving forward in career development, we will include the use of innovative technology to improve processes. During a global pandemic, we connected on Zoom, through social media from our summer homes, from our cars- not while driving, and from our home offices. From Canada and California, we connected with authors from around the United States (Florida, Maine, Pennsylvania, Kansas, Colorado, Utah, and Texas), Canada (Alberta and British Columbia) and Singapore.

Most of us have never met in person. We came together to create an academic piece of work to help fellow practitioners and their clients navigate their way far into the next decade.

The vision has become reality. Our hope is that this journal inspires career practitioners all over the world to become more open to new technologies, new products, new processes, and new business/management methodologies. May this journal guide you to your own workplace of the future.

Lastly, we felt it was important to start this journey into the future with hope because as practitioners that is what we offer our clients, hope for their future. So, it was only fitting that Dr. Norm Amundson was asked to introduce this journal with a few words on hope for the future in the fourth industrial revolution.

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ABOUT THE AUTHORS



Steven Beasley

Steven was an outside contractor to Hewlett Packard helping a division to downsize employees. He taught small groups at eight HP locations in the United States and United Kingdom -- 650 persons in total -- how to conduct a career management program which he developed.

The company encouraged employees affected by the workforce cuts to use his self-assessment process and career marketing program to present their skills and interests to managers with talent needs (identified over the HP Tel-Net throughout the company), in search of a good fit where they were needed. The workers used this training to make a career transition or change careers. Subsequently, Steven implemented this process at other companies (e.g., Amoco Petroleum in Chicago, Northwest Airlines in Texas). Editor Emeritus, Career Development Network Journal.

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*Steven Beasley passed away on July 3, 2021. Without his vision of creating another issue of the journal *How We Will Work in the Future*, this project would never have come to fruition. We are deeply indebted to Steven Beasley for being the person of vision for this journal and to Dick Knowdell for being the person who helped make Steven's vision a reality.*



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Ann Nakaska has a Master of Education Degree with a workplace and adult learning specialization and a Career Development Certificate from the University of Calgary. She is a certified Career Development Facilitator (CDF).

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OVERVIEW: HOPE AND WORK IN THE FOURTH INDUSTRIAL REVOLUTION

By Norman Amundson

There is little doubt that we are in the midst of a transition to a very different labor market and educational framework. The transition integrates digital, physical, biological, and psychological elements. Within this evolving structure, there is less emphasis on traditional jobs and more focus on skilled work development. In this new reality, high-level skill training is essential, but not necessarily tied to formal post-secondary academic structures. Within this economic and social structure, unemployment co-exists with high levels of labor shortages. In many respects this is an age of paradox where we are challenged to hold many conflicting ideas and beliefs with an open hand.

This current CPAD journal highlights many of the themes that run through this fourth industrial revolution (robotics, virtual reality, globalization, STEM, enhanced surveillance, social media, life-long learning, human service needs, constant adaptation, and so on). In this brief introduction, I would like to look at some of the underlying personal competencies that are needed to cope within this fast-changing context. What is the intersection of hope and work in the fourth industrial revolution?

The underlying model of Hope-Action Theory (HAT) is a good lens by which to view some of the needed personal changes (Niles, Yoon, & Amundson in Niles, Amundson, & Neault, 2011). The HAT is grounded in Snyder's (2002) action-based work on the importance of hope and forgiveness; Bandura's (2001) theory of agentic behavior; and Hall's (2002) concept of adaptability and the protean career. In bringing these together, HOPE is placed at the center of career development, surrounded by a number of competencies and environmental influences. The following pinwheel diagram illustrates the various facets of HAT:

Figure 1: Hope Action Pin Wheel



The winds of change (ENVIRONMENTAL influences) are in full force as we head into the fourth industrial revolution. These are not just gentle breezes pushing us forward; the strength of the winds is significant, and they are presenting us with many challenges (and opportunities). To navigate new pathways, we need more than just wishful thinking; we need a set of solid competencies to help us maintain HOPE as we move forward. Feeling hopeful is a way to ground ourselves as we face the turbulence of change. According to Snyder (2002), the following three components help to provide this sense of hopefulness: (a) setting of a goal or anchor point for our actions; (b) critical thinking (or pathways) that will enable us to move forward; and (c) a feeling of confidence in our ability to achieve our goals.

As a starting point, it is important to engage in a period of SELF-REFLECTION where we step back and ask ourselves questions about life issues and where we are headed. This is a time to consider what matters most in life, what we enjoy doing, what possibilities are open to us, and what would we like to accomplish. This is a time for reflection on the meaning and purpose of living well. Often people rush ahead, taking little time to set a clear direction for their efforts. Attending to our “being” as well as to our “doing” is essential for providing a foundation for hope (Amundson, 2018).

As we engage in self-reflection, the focus often shifts towards the need for better understanding of the self, the need for SELF-CLARITY. We need to appreciate our full capacity and the interests that hold our attention. This requires an understanding of our skills, interests, values, and personality, and also the ways in which these foundational elements change over time. Developing self-clarity is a journey that is ongoing and lasts a lifetime.

In setting a career direction during a time of change, we need to broaden our imagination and think about possibilities as well as barriers. We need to engage in positive VISIONING of our options and how we are going to move forward with a sense of hope. Our imagination holds our dreams and hopes as well as worry and doubt. The challenge here is to set our thoughts and feelings on hope and on what is possible.

With a positive vision of what might be possible, there is a need to pull things together and thoughtfully create specific GOALS AND PLANS. This usually requires a narrowing of choices and the creation of goals that are concrete, well-defined, realistic, and doable. Going alongside the goals are specific plans for how the goals will be realized.

Winds can change quickly, and the winds of change are global and are blowing strong through the economy, our health system, our political structures, and our social systems. As people attempt to IMPLEMENT their goals, they will need courage and persistence to keep momentum going. There undoubtedly will be bumps in the road and a need for resilience in the face of challenging circumstances. In some cases, the “bumps” will require more than a minor adjustment; there will be a need for full blown ADAPTATION. It can be helpful to have back-up plans and then back-ups to the back-up plan. Gaining momentum requires a positive and hopeful outlook coupled with a willingness to take risks. In moving forward, uncertainty is acknowledged but as was stated earlier, there is a need for a paradoxical perspective where both positivity and uncertainty are held together (Gelatt, 1989).

In putting forward this set of competencies and environmental influences, it is important to keep in mind the non-linearity of the HAT approach. There are many instances where people will get to a certain point and then need to return to other competencies to find their way. The pinwheel in the diagram does represent the idea of instability, and this instability can be amplified during seasons of turbulent change.

What does stand firm in the process is the importance of HOPE as a foundation. There are strong correlations between hope and job performance, sports performance, health, organizational commitment, job satisfaction, clarity in career decision making, overall confidence, and academic achievement (Niles, Amundson, Neault, & Yoon, 2020). The overall physical and mental well-being of people as they head into the fourth industrial revolution is a critical component, and to effectively make the transition, the level of hopefulness will be a key component.

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Alumni Lifetime Achievement Award; The Fifth Honorary Life-Time Member of the Association – Swedish Association of Guidance Counsellors.

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SECTION 1: IMPACT OF TECHNOLOGY ON THE WORKPLACE

CHAPTER 1: AUTOMATION: THE FUTURE OF WORK AND CAREER COUNSELLING

By Charles Lehman

Automation and Careers

Career counselors provide labor market information to their students and clients as part of their work, so access to and understanding of the current and future job market is critical for enabling counselors to expertly provide information about job trends and needs for both local and national levels. The acceleration of technological and economic changes makes this need more critical for advising both new entrants into the job market about where they can find stable, long-term employment choices, and, increasingly, individuals who require transition into new career fields.

One of the major concerns in labor economics, and increasingly so in society, is the extent to which rapidly increasing automation will affect the job market over time, impacting industries and occupations, causing disruptions, and potentially leading to major unemployment. Considerable interest is being devoted to this topic by academic researchers, think tank policy advisors, and business consulting companies to advise public and private organizations. (The US government has done very little work in the area, unlike national agencies in many other developed countries, where the national government plays a major role.)

Predicting the future is, by definition, difficult to do. The impact of technological change on labor markets depends not only on the development and implementation of automated processes and machines, but also on economic, political, and social conditions and their interactions. Many of the projections for the next five to ten years seem reasonable, based on current trends, but beyond that time, projections are much more speculative. This article looks at the shorter timeframe in detail and provides a possible outcome longer term.

Timeframe Impacts

Researchers are forecasting that economic and technological conditions and trends now underway will have profound effects on the job market, both short term and long term. Historically, automation increases during recessionary periods as companies endeavor to reduce labor costs; this process was accelerated during pandemic as employers faced a shortage of available workers due to health and related restrictions. The health crisis was made particularly acute, with many workers not being able to return to their positions once the pandemic ended. One estimate is that 46% of jobs lost during the early stages of the pandemic would not come back, so production and services would need to be accomplished with less worker involvement. Nearly 85% of employers planned to accelerate long-term business adaptations due to the pandemic by digitization of work processes, video conferencing, and offsite individual work. Half were planning to accelerate individual task automation.

Historical Technology Effects

One of the central themes in economic history is change in technology that immediately impacts employment and then results in both expected and unanticipated changes over time. Economic history describes a series of advances that are considered as industrial revolutions, largely driven by technological and automation changes that greatly change the means and factors of production. These result in much greater productivity, and they cause especially major changes in the types and numbers of jobs. The first industrial revolution in England in the 1600s was based on machinery replacing human physical labor in factories, brought about by the invention of the steam engine and powered textile machinery. The second industrial revolution occurred largely in the United States in the late 19th and early 20th centuries, facilitated by the invention and wide-spread dissemination of electricity, steel foundries, and automated equipment such as the internal combustion engine and the cotton gin, for mass production of goods. The third industrial revolution, which began in the mid-20th century and is considered to still be underway, largely consists of computers and digitalization of production processes through turning information and media into computer language for replications and application.

The fourth industrial revolution, considered to be at its beginning stage, depends on the massive increases in computer capacity and speed. This capability initially led to robotics and to sensors that are creating the Internet of things. It is now enabling the application of this computer capability to develop repetitive pattern-recognition processes, or algorithms that facilitate the advent of so-called artificial intelligence (AI) to perform work tasks without human intervention.

In the first three revolutions, jobs were lost from the declining industries, but the new production processes created new industries and occupations, and along with the increased productivity, resulting in a sizable net job gain. As an early example, in the transportation industry, horse-drawn carriages with blacksmiths and farriers were replaced by automobiles with production factories, mechanics, and service station attendants. An often-cited recent example is the installation of ATMs, which actually increased the need for bank tellers for different duties at more branch offices.

Most economists now contend that the technological increase from AI will be so rapid and extensive that replacement and growth conditions will no longer be the result, and that jobs lost will exceed by a substantial amount any new jobs or occupations gained.

Automation Acceleration

There has been more progress in AI and robots in the last three years than in the previous fifty. This is expected to accelerate much more due to technological advances arising from the substantial increase in computerization capacity, improved robotic designs and implementation, and advances in the first stages of AI. According to many experts, this will eventually result in AI exponential growth like that experienced with computers. Since machines are increasingly taking over basic pattern recognition and complex communications, the tasks left for humans are creating new ideas and concepts, involving very complex communication and large pattern recognition, that provide new ideas and examples and lead to innovative applications and advancements.

Industry and Occupational Changes

There have been several estimates of automation impacts short-term over the next five to ten years for different industries, occupational groups, and specific occupations. While there are some differences amongst the estimates, many arrive at similar conclusions. These forecasts have been conservative because the full development and application of this new AI is hard to predict, and must overcome economic and social barriers. The forecasts also do not yet consider the accelerated pace due to the pandemic effects on worker availability and cost.

A number of studies and surveys that estimate industrial job changes due to automation during the current decade expect these changes to be concentrated in the same industries, with some minor differences. The McKinsey Global Institute (2017) found the highest degree of automation occurring in food services and production work, and medium degrees in the office, transportation, and construction and maintenance sectors. This analysis considered lower, but still significant risks in sales, healthcare, legal services, information technology, and professional services. Another analysis forecast within the McKinsey report stated that the most job losses during the next decade would occur in office support, food services, production, and customer services, with lesser losses in construction, business and legal services, and installation repair.

Initial projections of occupational change were interpreted as identifying occupations that were subject to automation, implying their demise, which the authors of a famous early Oxford University study subsequently said was not the right conclusion. Research since has largely focused on the change in job duties within an occupation, rather than on the complete occupation.

One example of this in the McKinsey report is an analysis of work that contends each job consists of 20 to 30 activities. It then groups occupations into eight categories, with three of them being relatively easy to automate based on the type of work activities: data collection, data processing and physical structured work. Together, these three categories comprise half of all labor work. Another study, also within the McKinsey report found that only 5% of occupations would disappear, but 60% would have a significant number of tasks automated in some way. The question then arises as to whether a job would be so fundamentally changed as to be considered a new occupation, and whether the job duties or tasks would be so new that a worker would not be able to participate in that occupation based on their skill set without retraining.

At the most extreme, Ginni Rometty, the CEO of IBM stated at a 2019 CNBC conference that she sees AI changing 100% of all jobs in the next 5 to 10 years. In another report by the McKinsey Global Institute (2017), it was estimated that between 16 and 54 million workers will need to change occupations before 2030, depending on the rate of automation adaption, and that one-third will need to learn new skills in management, communications, social and emotional and advanced cognitive local reasoning, and creativity. By 2030, about 39% of all full-time-equivalent work could potentially be displaced.

Initially, automation affected occupations primarily requiring physical skills, such as manufacturing workers and laborers. The next advance was occupations that relied on routine repetitive work that could be better handled by computers, such as that of accounting clerks.

Short-term trend analysis sees major AI advances moving into occupations requiring much more cognitive or thinking skills in some legal, financial, and medical applications, and eventually even into creative functions such as those of artists and journalists. Occupational areas that appear to be less amenable to AI and automation are those requiring interpersonal relationships, such as nurses and childcare workers. Counselors were 42nd on the list of 702 occupations least likely to experience serious automation (Mahdawi, 2017).

One estimate reported within McKinsey (2017) projected the highest losses in occupational categories to the year 2030 to be in physical work and office support, followed by food services due to automation. While there would be some impact, there would still be overall employment gains in technical professions, health careers, and construction and repair. Lesser growth was projected in administrative professional, managerial, creative, and educational fields, overcoming any losses due to technology.

Occupations with expected significant jobs increases were healthcare (48% in professional, such as physicians and nurses, and 30% in technical support, such as medical laboratory technicians), STEM type work (21%), business service specialists (20%), managers (18%) and employees in education (17%).

Occupations with increasing demand were those specialists in all kinds of computer and information technology work, data analysts, digital application, cyber security, robotics, organizational analysis, and strategic planning. Business services managers and machinery repairers were considered both increasing and decreasing by different groups of employers. An international survey of executives at major companies showed the following:

Top 20 Jobs Increasing and Decreasing Demand Across Industries

Increasing Demand

1. Data Analysts & Scientists
2. AI & Machine Learning Specialists
3. Big Data Specialists
4. Digital Marketing & Strategy Specialists
5. Process Automation Specialists
6. Business Development Professionals
7. Digital Transformation Specialists
8. Information Security Analysts
9. Software & Applications Developers
10. Internet of Things Specialists
11. Project Managers
12. Business Services & Administration Mgrs.
13. Database & Network Professionals
14. Robotics Engineers
15. Strategic Advisors
16. Management & Organization Analysts

Decreasing Demand

1. Data Entry Clerks
2. Administrative & Executive Secretaries
3. Accounting, Bookkeeping & Payroll Clerks
4. Accountants & Auditors
5. Assembly & Factory Workers
6. Business Services & Administration Mgrs.
7. Client Information & Customer Svc. Workers
8. General Operations Managers
9. Mechanics & Machinery Repairers
10. Material Recording & Stock-keeping Clerks
11. Finance Analysts
12. Postal Service Clerks
13. Sales Rep., Whls. /Mfg., Tech/ Sci Products

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| 17. FinTech Engineers | 14. Relationship Managers |
| 18. Mechanics & Machinery Repairers | 15. Bank Tellers & Related Clerks |
| 19. Organizational Development Specialists | 16. Door-to-door sales, News/Street Vendors |
| 20. Risk Management Specialists | 17. Electronics & Telecom Installers/Repairers |
| | 18. Human Resources Specialists |
| | 19. Training & Development Specialists |
| | 20. Construction Laborers |

Source: The Future of Jobs Report 2020, World Economic Forum

A number of new or niche occupations are emerging as automation becomes more prevalent. Some of these are:

- cloud computing engineer and consultant
- digital media specialist, coordinator, and content writer
- artificial intelligence specialist, data scientist, engineer, developer, and analyst
- engineering technologist
- digital marketing specialist, manager, project coordinator, and consultant
- human resources talent recruiter
- sales enterprise account and business development specialist

Employability Skills

While soft skills have always been important in finding and keeping a job, they will become essential as the economy moves to greater automation and as occupations change more rapidly. These capabilities are as much or even more essential than hard technical skills that can be more readily imparted through education or on-the-job training. Interpersonal and creative abilities are skills that computer systems cannot yet emulate. Career counselors should emphasize how critically important employability skills are in the future of work economy when advising their students and clients, in addition to determining interests, providing labor market information, and assisting in job search.

The World Economic Forum’s Future of Jobs Report 2020 identified 15 top skills for 2025:

Top 15 Skills for 2025

1. Analytical thinking and innovation
2. Active learning and learning strategies
3. Complex problem-solving
4. Critical thinking and analysis
5. Creativity, originality, and initiative
6. Leadership and social influence

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7. Technology use, monitoring, and control
 8. Technology design and programming
 9. Resilience, stress tolerance, and flexibility
 10. Reasoning, problem-solving, and ideation
 11. Emotional intelligence
 12. Troubleshooting and user experience
 13. Service orientation
 14. Systems analysis and evaluation
 15. Persuasion and negotiation

Source: Future of Jobs Survey 2020, World Economic Forum

These soft skills will be needed to support essential aspects of the changing world of work:

- Lifelong learning is most critical as industries and occupations change more rapidly and require new skills.
- Adaptability is necessary to adjust to new processes and procedures and ways of doing work tasks.
- Creative thinking has been listed by employers as a major needed skill because machines will increasingly handle routine and predictable work.
- Problem solving is becoming more important to determine the best methods of interaction between machines and humans.
- Teamwork allows individuals to work successfully with those in other disciplines.
- Communications abilities in writing, speaking, listening and digital applications are a given.
- Digital mastery is a must in automated workplaces.

While it is difficult to measure some of these skills, online short-term workshops are becoming increasingly available, and could be recommended to clients. In addition, there are existing and new aptitude tests that can help determine the levels of some of these employability skills. While determining interests is a key component of career counseling achieved through assessment tests or counseling systems, the need to ascertain aptitudes is of equal importance as new skills become even more important in a field.

Counselors should also become familiar with O*NET, especially the tables that show primary tasks and duties, as well as transferable skills. The Occupational Outlook Handbook online provides job descriptions, duties, training, national employment outlook, and related information for several hundred occupations, although it can become quickly outdated in industries and occupations experiencing rapid change.

A Future Role for Career Counselors

Over the next short and intermediate time periods, some economists and scientists expect an important role for humans will be working cooperatively with machines to guide and handle

activities that combine the best of the unique abilities of both humans and AI in a way neither could accomplish alone. Career counselors should emphasize the need for computer skills and knowledge with their clients regardless of occupational choice.

Some forecasters see occupations that require uniquely human skills such as healthcare, social workers, and teachers to be irreplaceable by AI machines, no matter how much technology advances. But one esteemed futurist forecasts that at some future time, machines will become so powerful that they will no longer need to mimic human behavior and intelligence. They will be able to accomplish work using different approaches as algorithms to break occupational work into tasks that can be accomplished without human intervention. Over time, the tasks will be aggregated, in most cases, to automate the entire job. Eventually the machines will become so much quicker, cheaper, and better that they will progress independently, with humans no longer needed to work with them. At that point, there may be some “residual” or highly interpersonal work that humans could do better or prefer to have done, but the vast amount could be done without their involvement.

The displacement time of this scenario is difficult to determine, with the expert expecting it to occur over a period of decades and at an uneven pace with geographic, economic, cultural, and social factors affecting implementation. While education to keep up with machine advance is desirable and necessary, at this future time even the most advanced education will no longer be needed. However, for the next decade, he expects the rate of change to be limited.

So, if this scenario plays out at some future but undetermined time, career counseling will have to change as jobs disappear. Government-provided universal basic income may arise to handle the lack of remuneration, but it will not address the lack of work. While there may be some individuals who will continue to work for intrinsic self-fulfilling purposes, self-esteem, or community contribution, most will be left with great amounts of leisure time to fill. Career counselors may have to or could become, life style counselors helping their clients explore, evaluate, and implement activities that give purpose to their life.

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CHAPTER 2: AUGMENTED AND VIRTUAL REALITY: IMPACT ON TRAINING AND EDUCATION IN THE NEW WORKPLACE

By Ann Nakaska

As career practitioners, it is important for us to understand what changes technology will have around professional development within organizations. For the purposes of this article, we will focus on how augmented and virtual reality will impact the human resources department, in particular education and training in the new workplace.

Augmented reality (AR) is a combination of our real physical world and the digital or virtual worlds. For example, users may wear augmented reality glasses allowing them to see everything around them but with a digital overlay adding easily accessible information to their work. Lesser known, mixed reality (MR) is a hybrid of the physical and virtual worlds. Whereas virtual reality (VR) completely replaces the user's real-world environment with a simulated one. Using AR, MR and VR is the place where our world and the technological worlds starts to blur together. For the purposes of this article, we will focus mainly on the better-known AR and VR.

To understand why companies would use AR and VR we need to explore the following:

- Why companies want to use AR and VR in organizational training
- How AR and VR are being used within organizations
- How AR and VR training are being used in different industry sectors
- A detailed example of how AR/VR is being used in the workplace

Why Companies Want to Use AR and VR in Organizational Training

To answer this question, we need to understand the benefits of using augmented and virtual reality. In an examination of the literature, it was found that not a lot of research has been done in this field. Andrew (2018) also found there had been a limited number of studies of how AR effects the brain and how the brain responds to various AR tasks.

Andrew, CEO of Neuro-Insight, a neuromarketing and neuroanalytics company, discusses how in collaboration with Mindshare UK and Zapper their company created 'Layered' a study to better understand the consumer, and the neurological and brand impact of AR. In their study, they wanted to see the differences of how the human brain reacts when it is doing an AR task compared to the exact same type of task without using AR. They created 6 different comparisons between AR tasks and non-AR tasks using different technologies.

Their findings were that augmented reality:

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- Drove higher levels of attention than any other medium they studied, with higher levels of cognitive activity. In fact, the AR tasks showed almost twice the cognitive activity compared to non-AR tasks.
 - Delivered a 45% higher level of attention compared to television. AR had a greater ability to provide surprising and emotionally powerful experiences.
 - Resulted in memory encoding being 70% higher in AR tasks versus non-AR tasks.

In health care training, a huge advantage of using VR training in surgical procedures is that these training tools can incorporate a “checklist assessment” that allows for extremely specific surgical proficiency measures. This allows hospitals better ways of assessing new residents than the previous subjective measures. With VR training, hospital management can know exactly which surgeons, new and established actually have the skills necessary to perform a procedure. While in residency, new doctors will not always be performing exactly the same number or types of surgeries as their counterparts which means new residents will be more experienced in some areas and less so in others.

VR can provide more consistent levels of training to medical personnel across the board and built-in assessments can identify skill gaps before the doctor works on a live patient. For example, Blumstein (2019) cited a study by the UCLA David Geffen School of Medicine demonstrating that by using the Osso VR platform participants improved in surgical techniques by 230% over traditional training methods.

With these results from AR and VR training, it only makes sense that human resource departments, especially learning and development teams, would move to embrace the use of AR/VR in employee training. As augmented and virtual reality technologies become more affordable, their use within the business world will become more prevalent.

How AR and VR are Being Used Within Organizations

BasuMallick (2020) cited the 2019 Training Industry Sector Report by the AR/VR Association, stating there are over 100 companies working on AR for training purposes. We have found that the major uses of AR and VR in human resource departments can be grouped into these three main areas:

1. Recruitment
2. Onboarding
3. Training

We can explore how companies are integrating AR and VR technology into these three areas of human resources.

Recruitment

Companies are now able to engage new hires and offer more immersive recruiting experiences. For example, the UK military offers potential hires the opportunity to take part in a virtual Challenge 2 tank mission as part of its recruiting practice and according to Davies (2016), they

also use VR to demonstrate to new recruits what it is like to fight in a war zone. The UK military have also developed a “100 Percent Army Fit” app which allows people to train up to the level of soldier in training.

The military is not the only one using VR in recruiting. The University of Michigan, Iowa State University, and the University of Las Vegas all use VR to recruit athletes for football and according to Davies, the Savannah College of Art and Design uses VR to give prospective students a virtual tour of their campus while Trinity College uses VR at recruiting events as well as with alumni.

Also, Roebroek (2016) suggests that human resources will be able to start assessing job candidates in virtual reality work situations, allowing human resources personnel an opportunity to see how a potential new hire will perform in their new role.

It only makes sense that in the future, more interviews and recruiting will take place virtually. Human resource departments can interview potential candidates from a wider geographic area with little to no added cost. In the not-too-distant future, we will be meeting with our interview panel in a virtual meeting room. Given the prevalent use of platforms like Zoom and people’s increased confidence in using such platforms, VR interviewing will be a part of the recruiting process in the majority of companies. According to Davies, many companies are already holding virtual job fairs and open houses allowing HR to interview from their corporate offices. Once new employees are hired, AR and VR will help integrate them into their new workplace.

Onboarding

Imagine it is your first day at work. Your company uses AR in their onboarding procedures. You can now “tour” around the company exploring multiple locations, hear a speech from the CEO and get to know your fellow employees simply by pointing your smartphone at them. You will learn their names, positions, and responsibilities. Your first day will be the most immersive you have ever experienced.

Biswas (2018) states that VR can transform the onboarding process in the following three ways: gamification, functional training, and team assimilation. By adding gamification to the onboarding process companies can change boring employee handbooks and onboarding Power Point presentations into engaging games for new employees. Virtual reality can allow new personnel to experience safety trainings, giving new recruits time to practice new skills or learn safety measures, such as fire prevention and hydrogen sulphide safety. Lastly, as mentioned new employees can meet virtually with senior level management, field staff or global teammates reducing onboarding costs yet still creating a greater sense of belonging in the organization. Employees will continue to use AR and VR in their future workplaces as training moves more and more to AR and VR platforms.

Training

BMW already uses AR/VR for training their service engineers and Boeing is using VR to train its pilots to fly the 787’s. By far, this is the one area of human resources that will be expanding

rapidly with AR and VR technology. According to BasuMallick (2020) there are 4 main reasons training with AR/VR will become more common place in organizations:

1. Overcoming cognitive barriers
2. Public sector is already embracing AR
3. Learning Experience Platforms (LXP) are replacing Learning Management Systems (LMS)
4. Prevention of harassment and discrimination in the workplace will be a vital use of technology

Overcoming Cognitive Barriers

An advantage of using AR/VR training is that it allows people to use 3D virtual models instead of learning from traditional 2D materials. They are also able to manipulate training objects allowing for more robust learning. Most importantly, while learning, employees can make multiple mistakes without negative consequences, reducing training anxiety. Fade (2021) also discusses how VR can reduce employees fears during training.

Imagine this. Zero people will be harmed while surgeons practice new surgical techniques using virtual reality. Welders can practice difficult welds as many times as needed, and employees practicing machine maintenance will not damage any equipment by making the wrong move. This allows employees the time they need to get skills right without fear of making costly or even fatal mistakes, and it allows companies to better train employees with reduced cost and liability. This also frees up the mental energy employees would expend on worry and anxiety; instead, they can focus on learning the task at hand.

Fade (2021) agrees, stating that VR removes many barriers to learning, but most of all allows for training to take place anytime and anywhere, reducing travel costs and reducing time off for workers to attend lengthy training sessions. This makes training more affordable and accessible regardless of the size of the company.

Fade also contends that VR can offer employees low-stress training opportunities when learning high-stress skills, such as negotiation skills, sales pitches, and public speaking.

Lastly, Fade emphasizes that VR training can reduce psychological barriers to learning. Virtual reality can provide a uniquely safe environment for employees who are practicing new skills, allowing them to learn faster with better retention and offering companies a bigger return on their training investments.

Public Sector is Embracing AR

In the public sector, government agencies like NASA are already using AR/VR to train their astronauts. Both the US Air Force and the UK Air Force are using AR/VR training. Davies (2016) states that the military uses VR to train their military personnel so that soldiers can be exposed to a wider variety of combat situations in less time than field training.

Companies like ThirdEye are key in this adoption by the public sector. Third Eye has developed a set of AR glasses (X2's) that aerospace and defense companies also use in a number of ways. These glasses allow them to communicate with experts remotely, receive live instructions and do remote repairs. This technology helps with aircraft maintenance and onboarding procedures. In this field, military personnel work on a wide variety of machines and technology and the X2 glasses allow for quick training of new personnel.

Learning Experience Platforms are Replacing Learning Management Systems

BasuMallick (2019) suggests that we think of Learning Experience Platforms (LXP) as the Netflix of Learning Management Systems (LMS). While traditional LMS are a closed system, restricting users to a specific learning pathway; LXP are open systems allowing users to gather information from other outside sources. Similar to how LinkedIn has combined Lynda.com with its many LinkedIn experts. The new LinkedIn learning system allows users access to learning materials from outside sources such as Harvard Business Publications and Ted Talks.

Employees then have greater access to learning materials. It allows employers an opportunity to have access to what employees are choosing to learn about in addition to recommended trainings. We know that people often do a lot of side learning in their spare time in addition to traditional learning programs. These new systems would allow employees to get additional credit at work for what they are learning on their own time, but it also allows employers the opportunity to find employees whose extra curricular learnings potentially fill organizational skill gaps.

Prevention of Harassment and Discrimination in the Workplace

According to an article by Harvard Business Review cited by BasuMallick (2020) since the #MeToo movement, blatant sexual harassment has decreased; however, more subtle forms of harassment have significantly increased. Using VR to simulate interpersonal interactions, employers can help employees gain immediate feedback on improving their soft skills and interactions with other people reducing the amount of workplace harassment and discrimination. VR training also allows employees to learn skills in dealing with potential harassment situations.

Vantage Point VR training was specifically designed for sexual harassment prevention in the workplace. It does this by taking into "account contextual and hard to detect nuances of common sexual harassment situations" (Lotze, 2019). Virtual reality has the advantage of helping people feel real emotions in virtual situations, allowing for more empathy to develop between employees in different workplace situations.

One Last Point on Training

There is one more reason not discussed by BasuMallick for companies to embrace AR and VR training, one which will be of utmost interest to career practitioners. A company called Upskill uses their AR glasses in training employees in a very complex manufacturing role in the aerospace industry.

In this process, Boeing workers must thread miles of wire into wire harnesses. Before AR training, the process involved a lot of looking from laptops or iPads to the work at hand. Now with the use of Skylight system, workers have a schematic diagram on their AR glasses that shows exactly which wire is placed in which hole. This process has helped workers work hands free, keep their eyes on their work instead of looking back and forth from instruction manuals to the actual work while completing the task, and has greatly reduced the time it takes to complete the task.

The best part though is that this once complex task can now be taught to employees who have very low manufacturing skills; getting them trained up, working effectively, and efficiently in no time at all. With so many people being outsourced by automation, AR and VR training allows for the quick training of unskilled workers. With so many benefits it is easy to see why so many industries are adopting AR and VR technology.

How AR and VR Training is Being Used in Different Industry Sectors

We can easily see how AR and VR allows for a wider range of training opportunities with reduced costs and liability issues. Virtual training is so attractive for use in the health care field because medical staff can practice new skills as many times as needed without harming any people in the process. Also, with virtual training, employers can make sure that employees would not be allowed to work on a job until they have reached a specific level of proficiency measured by the virtual training program.

The global mining industry has also been an early adopter of these innovations as the industry tries to address multiple industry challenges.

These include low commodity prices, pressure to produce ever increasing tonnages, a widening skills gap combined with an ageing workforce, the need to protect workers in risky, remote locations, and an increasing reliance on complex, automated equipment that requires safe, efficient maintenance...AR, VR and remote technologies have the potential to address many of these issues by offering mining operators improved levels of productivity, safety and machinery uptime, improvements in KPIs [key performance indicators] such as load factor and swing times, and better staff collaboration and knowledge transfer. (Mining Technology, 2016).

Augmented and virtual reality can increase productivity, improve employee safety, and reduce maintenance costs. Mining Technology predicted that the AR and VR industry would be worth \$150 billion dollars in 2020. This figure will only continue to grow as virtual reality becomes more economical and more widely used. Even if we only examine the benefits of virtual training in relation to employee safety in the mining industry it is easy to understand why the mining industry and other industries would want to embrace AR and VR trainings.

Let us explore how this technology is being used in different industries.

Healthcare Training:

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- VironIT has developed “Anatomy Next” a web-based augmented reality and virtual reality software for medical education and health care professionals. They have also developed an ECG simulator that helps to train and evaluate medical personnel performing ECG procedures.
 - AccuVein is a company that uses “augmented reality in a hand-held device to help health care workers find veins more easily. With this device, they can improve blood draws and IV insertion by 3.5 times, greatly reducing multiple tries and improving patient satisfaction.”
 - Precision OS, a Vancouver, B.C. based company, has developed a virtual training program for orthopedic surgeons. Traditionally these surgeons would need to fly to cadaver labs, use tablets, listen to lectures, and learn on actual cases. These traditional ways of learning are far more time intensive and expensive. In a study done in collaboration with the Canadian Shoulder and Elbow Society, when compared to traditional training, the newer virtual training led to a 570% gain in efficiency among senior orthopedic surgical residents. What is more impressive is that each virtual training took only 30 minutes and was delivered over several locations.

Emergency and Safety Services Training

- VironIT worked with the Belarus Ministry of Emergency Situations to develop an inspection and firefighting project, training firefighters by simulating virtual life-and-death situations.
- ThirdEye’s X2 glasses allow emergency responders access to healthcare experts all over the world. They can live stream what they are seeing to medical experts, receive live feedback and can get diagnostic help, all while hands free. This allows responders to get advanced on the job training before and while treating patients.
- Many virtual reality companies, including ThirdEye, train employees how to work safely during manufacturing processes in several industries such as how to prevent oil spills and fires.

Mining and Resources

- In August of 2015, the Kumba Virtual Reality Centre at the University of Pretoria in South Africa opened, creating real life mining situations such as rock falls and giving students the new lived experiences in mining health and safety (Mining Technology, 2020).
- “Emimsar AR systems are used by Germany’s largest coal mining firm RAG in all of the company’s mines for maintenance planning on equipment, belt conveyors and loaders” (Mining Technology, 2020).

Management Training

- Groovetech (Groove Jones, 2020) developed a virtual reality business platform for training and product demonstrations that mirrors real world situations.

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- Strivr (2021) has developed “Immersive Learning [which] allows learners to have interactions and explore real-world emotional responses, and the opportunity to reflect on and assess their own performance.” Strivr works with companies such as Walmart to help managers and employees with issues such as inclusivity in the workplace. Placing company employees into virtual situations helps them develop more empathy because they experience real emotions within the virtual world.
 - Fade (2021) cites examples of UPS using VR to train drivers before putting them behind the wheel of their company trucks, which allows drivers to learn safe driving practices and how to avoid potential driving hazards, and FedEx uses VR to train package handlers.

A Detailed Example of How Virtual Reality is Being Used in the Workplace

Walmart started using virtual reality headsets to train employees in 2017. Lewis (2017) states they used this technology to improve customer experiences, assess worker skills and to train employees. They find it useful in creating training schedules for their employees with stores being open 24 hours a day and employees working different shifts.

Lewis also discusses how virtual reality training has been used by the company to:

- Recreate scenarios that employees will encounter in real store situations such as dealing with angry customers
- Train employees to handle Black Friday shopping crowds
- Determine which employees would make good middle managers
- Roll out new technologies and processes
- Train employees on pickup towers, their 15 ft. vending machines that allow customers to pick up online orders

Some of the benefits for Walmart in using virtual reality:

- Bailenson (2020) states that Walmart reduced their training times on the pickup towers from 8 hours to 15 minutes with no drop in efficiency. As most associates need to train on the tower, this will save the company over a million hours of training time.
- It replaced their global learning management system which took 30 to 45 minutes training time and reduced it down to a 3-to-5-minute virtual module
- Ten thousand of their 1.2 million employees have taken the skills management assessment
- They plan to train one million employees over 4000 stores

Walmart’s human resources staff are still heavily involved in training. To use virtual reality in a way that helps the company attain its objectives, people must still be involved to create new training modules, adjust poorly created modules, and to run the trainings and oversee employees.

Conclusion

AR and VR is being widely used across a wide variety of industries in their human resources departments, especially in education and training. AR and VR equipment is becoming more affordable making it more accessible for companies and easily used for recruiting, onboarding, and training. With many AR and VR platforms allowing companies to create their own AR/VR training programs, companies will be quick to embrace virtual reality training.

The benefits of increased safety, low-cost training, and increased engagement and memory during training are all reasons why AR/VR will find its way into human resource departments in workplaces around the world. Saidin et al. (2015) reviewing research in the education field supports these reasons, finding that students using AR became more engaged in the learning process and improved their visualization skills. Saidin et al.'s review of the literature on AR in education highlighted the use of AR in explaining abstract concepts often found in science. Augmented and virtual reality training allows workers to see complex training materials in 3D versus 2D images, helping them visualize the work they need to learn.

As career practitioners, it is important for us to understand the role of augmented and virtual reality being used in organizations today and in the future. This way, we can educate our clients in the role of AR and VR in recruiting and the interviewing process, as well as its use in job fairs and open houses. We can also prepare clients for the potential use of AR and VR in the onboarding process. We can increase the education of our clients regarding the career opportunities provided by this exciting technology. Lastly, we can be extremely excited about a technology that can train people with very low skills sets into jobs they may never have been able to apply for in the past. Augmented and Virtual reality will change the way we train employees of the future, but it will also open doors for many unskilled workers replaced by other technologies.

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CHAPTER 3: THE TRADES AND SERVICES IN THE FOURTH INDUSTRIAL REVOLUTION

By Mason Murphy

The fourth industrial revolution has arrived (Schwab, 2017). Some professionals did not see it coming and some did. The question now is, how do career counselors and adult educators effectively work with individuals to help them be successful in this new era.? The best way to understand this new era and its impact on blue collar professionals is to hear from those individuals directly. It is important to get the answers to three critical questions. How has technology changed their fields? How do they believe virtual reality and artificial intelligence will impact their fields? How do they stay current in their fields?

Here are the voices of a hair stylist, baker, dental hygienist, florist, paralegal, and plumber.

Hair Stylist

Rebecca Perez is a 40-year-old Hispanic woman who has been a hair stylist for 20 years. Perez has worked with a group of hair stylists for part of her career and has also owned her own salon. Perez has an associate's degree in cosmetology and has been licensed and trained to offer a variety of spa services.

How Has Technology Changed Your Field?

I think the biggest way things have changed is in the way of payment and scheduling (R. Perez, personal communication, October 26, 2020). Online methods of payment may now seem commonplace, but the move to online platforms has really changed the field. How they have changed the field is that the processes have become faster and easier for clients. A client can schedule an appointment within the salon's website and a scheduling portal. The client can select the specific stylist he or she wants to work with, and it is that easy. Also, clients can pay for services via that same online infrastructure. In the past, these types of transactions would all have had to be conducted in person. By cutting out this in-person process, the stylist can focus solely on the client's desired outcomes for the appointment. The stylist can prepare to offer additional services and product purchases, such as lotions and shampoos, that the client may like. Technology has enhanced the client experience, but it has also made things more efficient for the stylist.

How Do You Believe Virtual Reality and Artificial Intelligence Will Impact Your Field?

That is a great question (R. Perez, personal communication, October 26, 2020). Most stylists believe it will not, due to the field being such an in-person service that is offered. However, I do see both of these technologies impacting the field. Virtual reality could allow stylists to offer one-on-one consultation appointments where a client could shop around for hair style ideas and suggestions. I see this really being a benefit to

wedding parties. A bride and her bridesmaids could all get one virtual appointment together with a stylist, and the entire group could discuss hairstyles and hair colors that match their dresses and accessories for the event. This could help alleviate traditional tensions that occur between brides and bridesmaids. With artificial intelligence, that could be harder to predict, but I am sure it will have an impact in the future.

How Do You Stay Current in Your Field?

Anyone interested in the profession of being a hairstylist must attend state conventions and trade shows (R. Perez, personal communication, October 26, 2020). These are the venues where stylists learn about the newest hair care products and hair style trends. Nothing beats hard work. Stylists have to build their own client base, or they go out of business quickly. Stylists do have to keep up with the newest technology; otherwise, they will not be around much longer. But also, they will not be providing clients with the most current services available. Professional associations are important to become members of in this field. This provides opportunities for networking, like in white collar fields, but also it provides stylists a platform to gain continuing education hours and resources.

Baker

Juan Diaz is a 50-year-old Hispanic male who has been a baker for 30 years. Diaz has worked in grocery store bakeries and has also owned his own pastry shop. Diaz has an associate's degree in culinary arts and specializes in creating pastries for weddings, anniversaries, and graduations.

How Has Technology Changed Your Field?

Technology has changed the field of baking a lot over the years (J. Diaz, personal communication, October 27, 2020). For example, the equipment bakers use has become much more advanced, such as the technology that surrounds heating and cooling of pastries and baked goods. Furthermore, the automation in scales and measuring tools has become so much more advanced. Some bakers like to be exact when using ingredients, but others still prefer to use their own judgement when measuring items. I believe technology has its place in baking, but anyone who gets involved in this field does it out of joy and love—the joy of creating and making food. Making food is a way to show love to customers and loved ones. When a baker uses technology to heat a crème brûlée at just the right temperature, there is so much joy in watching guests enjoy what you have created.

How Do You Believe Virtual Reality and Artificial Intelligence Will Impact Your Field?

Virtual reality will allow the community of bakers and chefs to have a platform to share recipes or discuss challenges in the field (J. Diaz, personal communication, October 27, 2020). For example, if a baker is developing a new business, he or she will be able to get advice from a seasoned professional or peer. Most professions already use various

social media platforms to communicate. However, bakers do not have time to be on social media. They are too busy cooking and creating food, and they are putting in sometimes fourteen-hour days. Some bakers are running a small business in a small town where they have to focus on the finances and logistics at the local level and manage employees. As far as artificial intelligence, I could see this being helpful by developing an algorithm to track customers preferences and previous orders and offer them new suggestions to eat or purchase. This could also help bakers develop new flavor combinations and products for customers.

How Do You Stay Current in Your Field?

There are always culinary professional associations, but bake-off events are always a positive thing (J. Diaz, personal communication, October 27, 2020). It is something that people tend to overlook. Think about it this way. Every time people go to a Christmas or holiday party, they tend to discover a new recipe or item they had not known about. We as bakers do the same thing. To stay current in this field, a baker has to be very aware of what are the latest cooking tools and equipment, and that means everything from pots and pans to ovens. Culinary programs at community colleges are a great way to get a snapshot of the next generation of bakers because, at these programs, new ideas are developed through student projects.

Dental Hygienist

Jennifer Horn is a 32-year-old Caucasian woman who has been a dental hygienist for seven years. Horn has worked for the same private-practice dentist throughout her career. Horn has an associate's degree in dental hygiene and has been licensed and has maintained all continuing education hours.

How Has Technology Changed Your Field?

Technology has changed the field of dentistry even in the last seven years, which is recent, based on my experience (J. Horn, personal communication, October 28, 2020). First, we have the ability to do imagery work within the entire mouth of a person. Through our x-ray technology, we can see multi-dimensional images of the teeth and gums. Dentists and dental hygienists now have an ability to detect problems much quicker than before. For kids, we can detect cavities or potential cavities and address them sooner. For adults, we can detect gum and root issues and recession. Having great oral health is so important to overall total health. People outside the field do not realize how technology is changing our ability to enhance the quality of services and the health of our patients.

I think another aspect of dentistry that has changed is the tools that are used. They are crafted with such minute detail now (J. Horn, personal communication, October 28, 2020). The tools are smaller and slicker, and we have an ability to use them more effectively with our patients. In dentistry, millimeters matter when it comes to the work we do.

How Do You Believe Virtual Reality and Artificial Intelligence Will Impact Your Field?

I could see artificial intelligence impacting the field of dentistry in positive ways (J. Horn, personal communication, October 28, 2020). For example, we could have a bot or artificial intelligence being conduct a virtual pre-appointment with a patient a week before an appointment. The questions that we could ask the patient would involve:

- What are the biggest fears and concerns about coming to the dentist?
- What has been their worst experience and their best experience at the dentist?
- How can we make the experience a more positive one?

As dental hygienists, we can get the responses ahead of time and put them in a digital file that is specific to each patient. We can take that information and prepare to alleviate the universal fears about coming to a dentist and improve the quality of the experience overall. The process would not take any more time than it already does. The patient responses could be included in the patient's medical records, so it is easy to access.

How Do You Stay Current in Your Field?

With dentistry being such a hands-on field, dental hygienists have to do continuing education training through workshops and small conventions (J. Horn, personal communication, October 28, 2020). There is research that is conducted about everything from oral health, to working with insurance providers, to maintaining a private practice. It is important to learn from other hygienists and dentists. Sometimes it is good to shadow other dental offices as they do certain procedures. Getting training from faculty at schools of dentistry is also a good way to stay current with what is being taught. The field is an exciting field to work in, and it is such a great way to make a difference in people's lives.

Florist

Beverly White is a 60-year-old Caucasian woman who has been a florist for her entire career. White has worked in a variety of small floral shops, and she specializes in creating wedding and anniversary arrangements. White has an associate's degree in horticulture and has additional training in agriculture management.

How Has Technology Changed Your Field?

A lot of the work I do in floral design involves working with your hands (B. White, personal communication, October 29, 2020). It takes great attention to detail to be a florist. Not only do you have to understand what season to grow flowers, but also what soils and composts work best to help the flowers grow. A florist has to have a great eye for color combination and patterns for floral design. Technology is something that has made its way into this field over the last twenty years. For example, the basic change has been how people can order flowers online or receive flowers via delivery. One of

the ways technology has helped florists is through the electronics of scales and measurements. Some people might not think this is a vital part of our industry, but it really is a major aspect; for example, if we need to measure an aspect of a plant to gauge growth and health or water levels this is important. Weights and measures are also very important when it comes to seed production and distribution. This impacts the agriculture industry and what flowers get planted and how fast they get planted.

How Do You Believe Virtual Reality and Artificial Intelligence Will Impact Your Field?

I do not see this impacting the field right now or in the near future, but I think both virtual reality and artificial intelligence could have a place within the field (B. White, personal communication, October 29, 2020). For example, I could see in the future a virtual reality platform for gardening, where florists and gardeners would be able to conduct mock planting scenarios in a virtual space and test out new ideas. Furthermore, I could see a virtual space being used to simulate how to manage drought seasons more effectively in the growth of flowers. I could see a partnership between florists and beekeepers, and simulation scenarios being used in regard to pollination.

With artificial intelligence, it is a tool that will impact the shopping experience for customers (B. White, personal communication, October 26, 2020), meaning an artificial intelligence bot could help customers select flowers that would fit their event or personality preference—the flowers that fit your mood of your event, like happiness in bloom. This type of technology could be great for the industry because it will allow florists time to focus on planting and growing, but also a bot will help us generate more creativity with our designs.

How Do You Stay Current in Your Field?

It is funny to think, but the good old *Farmer's Almanac* is still a reliable source, believe it or not (B. White, personal communication, October 29, 2020). Most people do not even think it is published anymore, but it is available. There is a strong blogging and chat community online amongst florists, which can be a big help with growing plants and best practices in business. There are some really good magazines in our industry that are important to read.

Paralegal

Jessica Wilson is a 39-year-old Caucasian woman who has been a paralegal for 10 years. Wilson works at a small, three-person law firm where she assists with a variety of cases. Wilson previously worked at a non-profit organization doing marketing but gained an interest in law working summer jobs in high school at a local law firm.

How Has Technology Changed Your Field?

Technology has had a major impact on the work we do as paralegals (J. Wilson, personal communication, October 30, 2020). Technology has allowed us to digitize our

filing systems and records. Some people might believe this to be a small or common-sense aspect. In the day-to-day, this technology has allowed paralegals to work more efficiently. For example, if a paralegal is helping a lawyer with a case, the files can be broken down into manageable categories. There can be files with simply case notes and files about billing. There can be files about continuous aspects that need to be conducted for a case, such as individual interviews, court document filings, stenographer notes, and client feedback or questions. There is so much detail with the work of paralegals, and accuracy is vital. Paralegal work is very much like the field of accounting.

How Do You Believe Virtual Reality and Artificial Intelligence Will Impact Your Field?

Our work is so technical in the legal profession and so critical (J. Wilson, personal communication, October 30, 2020). I could see artificial intelligence playing a role in how we work with potential clients on the front end. For example, even a small law firm like the one I work for gets a ton of calls a day with individuals believing they have a case we should pursue. This can take up a lot of time for both paralegals and attorneys. There is a good number of potential clients who do not have cases that meet the standards required to move the process forward, meaning people think they have got a case, but they are looking at it from an emotional standpoint and not a legal one. I could see artificial intelligence as part of a screening process or intake process with clients, like a bot listening to their story and sorting the key words and phrases and writing a summary of the conversation. This will allow both paralegals and lawyers to review things quicker and make decisions about clients' needs. Furthermore, paralegals can focus on the day-to-day work in support of the lawyers at the firm.

How Do You Stay Current in Your Field?

Paralegals stay current just as lawyers would by following the work of the American Bar Association (ABA) (J. Wilson, personal communication, October 30, 2020). I think there are a lot of local and regional workshops offered by the ABA that are good. It is very important to follow case law and what is going on in the courts because you have to know how to support the attorneys you are working for. Professional development and continuing education are critical to the success of a paralegal. Getting graduate-level training in criminal justice or legal studies is also important to the continuation of the development of skills.

Plumber

Larry Shaw is a 55-year-old African American male who has been a plumber for 25 years. Shaw has worked with a variety of plumbing companies throughout his career. Shaw began receiving training as a plumber when he was in junior high school by working with his father who also was a plumber.

How Has Technology Changed Your Field?

Technology has changed the field of plumbing in such a big way (L. Shaw, personal communication, November 2, 2020). Plumbing is one of the first careers that people think of when thinking about trade industries. Plumbing is both an art and a science. The biggest changes are in the tool's plumbers use. The tools have gotten smaller and sharper, and they offer better precision. Think of plumbing tools like dental tools: they are a combination of craftsmanship and digital technology. If plumbers have to install plumbing in a commercial building or within any type of large structure, the ability to do mapping can be done digitally, much like in urban planning. Think of it as something like topography maps yet for plumbers. Plumbers still need to dig underground to work on water and sewer issues, but their ability to work can be more accurate.

How Do You Believe Virtual Reality and Artificial Intelligence Will Impact Your Field?

At the core, plumbing will always be an occupation where you use your hands and have to get under sinks and toilets and within the structures of a building (L. Shaw, personal communication, November 2, 2020). I could see virtual reality playing a major role in simulation training, where plumbers could work on complex problems in a virtual world. Furthermore, virtual reality will also help with the installation process in commercial buildings and homes, meaning a plumber could already have an idea or worked a demo of how to install something or how to repair something. Virtual reality can be a good thing for teaching people how to conduct basic home improvements. Today, people can find anything about home repair on YouTube. However, virtual reality can be used to develop adult learning classes on basic plumbing skills. A group could be put into a virtual world where a session could be taught by a master plumber on how to manage household situations.

With artificial intelligence, this is something where a bot could help with mathematical calculations, which will help with the design and maintenance of projects (L. Shaw, personal communication, November 2, 2020). This will allow both plumbers and electricians the ability to work together and develop a better product. Using artificial intelligence could also cut costs. The plumber would not have to spend time on buying unneeded supplies. This funding could be used to hire an additional employee.

How Do You Stay Current in Your Field?

How a plumber stays current is all about getting experience (L. Shaw, personal communication, November 2, 2020). The more work you do in this field, the better you are at it. There are different publications that plumbers refer to when seeking additional training and professional development. Apprenticeships for younger plumbers or those interested in the field is something that is important.

Conclusion

All these voices have echoed a positive and bright future for blue collar careers (Schwab, 2017). Virtual reality and artificial intelligence can align well with a variety of occupations. These new technologies can enhance work and allow individuals more time to develop and create new ideas for the future.

RESOURCES

American Association of Cosmetology Schools: <https://www.beautyschools.org/>

American Bakers Association: <https://americanbakers.org/>

American Bar Association: <https://www.americanbar.org/>

American Dental Association: <https://www.ada.org/en>

Plumbing-Heating-Cooling Contractors Association: <https://www.phccweb.org/>

Society of American Florists: <https://safnow.org/about-saf/>

Ted Talks

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CHAPTER 4: THE IMPACT OF TECHNOLOGY AND CAREER OPPORTUNITIES ON HUMAN SERVICES PROFESSIONALS

By Ann Nakaska

“You don’t want a robot taking care of your baby; an ailing elder needs to be loved, to be listened to, fed, and sung to. This is one job category that people are—and will continue to be—best at.” It may be surprising that this statement was made by Oren Etzioni, the CEO of the Allen Institute for Artificial Intelligence (Etzioni 2017) discussing which jobs people should consider when their existing jobs are automated. Etzioni strongly suggests a move towards caregiving jobs in his article, stating that the fields of professional care services are growing, especially in elder care. What he says is true. People are not really open to the idea of robots taking care of the people they love. While social robots may be used to assist caregivers, people generally prefer a human touch. Also, if you have ever heard a three-year-old talking to SIRI, you know that three-year-old will stump Apple’s personal assistant more times than not, leaving you to question the wisdom of ever leaving a child in a robot’s care.

Etzioni’s article raises several questions about the future that are important for career practitioners to think about:

1. Is there room within caregiving and other human services industries to absorb the millions of people who will be displaced by automation?
2. What will workers who are replaced by automation do for work, especially those who have little or no post-secondary education and how can we best advise them?
3. What will the impact of technology or the fourth industrial revolution be on human service industries?

As practitioners, we can agree with Etzioni that people will need to search for jobs or careers within industry sectors that provide future career opportunities, caregiving being just one of them. But as practitioners we also believe at a very fundamental level all people should be directed towards careers that will make the best use of their skills, abilities, and interests, even when there are few available options. For example, a truck driver replaced by an autonomous vehicle should not go into senior care just because that is an area that has lots of job openings. There will be work in a wide variety of industries, and helping people find their place in the new world of work is what is most important.

As Etzioni states, many displaced workers will be unskilled workers who will not have access to retraining, and therefore some caregiving roles become options. But this also raises the question who do we want taking care of those we love?

From a career development perspective, Etzioni’s article accentuates the need for retraining programs as the most practical solution to worker displacement. Retraining may even be more economical than a universal basic income program that would leave many people with minimal

income and no vocational purpose, an issue technological companies are not addressing, the concept of worklessness.

While Etzioni discusses how caregiving roles will be among the last to be touched by automation, he fails to discuss that the human service industries will also be impacted by the fourth industrial revolution. These industries are already implementing a wide variety of technologies, the same way that human services have been integrating computers in the information age. This article will examine the expected demand for future work in four areas of the human services and caregiving industries in general, and will give one example of how one form of technology from the fourth industrial revolution is impacting that particular industry. The four areas are:

1. medicine/healthcare and drone technology
2. child/elder care and virtual reality
3. education and augmented reality
4. psychology/social work and big data

Medicine/Healthcare

The field of medicine is an area of human care that is experiencing the largest growth in career opportunities, supporting Etzioni's article. According to the U.S. Bureau of Labor Statistics' (BLS) Occupational Outlook Handbook (2020), employment in the healthcare field is expected to grow by 15% overall from 2019 to 2029, much faster than the average for all other occupations. It is estimated that healthcare will be adding 2.4 million jobs during this decade and is projected to add more jobs than any other occupational group, mainly due to an aging population and the need for more healthcare services for this population.

While these statistics would indicate a bright and shiny future for anyone wanting to transfer to caregiving within the healthcare field, due diligence is still an important part of the career decision-making and career-planning processes. While the demand for nurse anesthetists, nurse midwives, and nurse practitioners is expected to increase by 45%, or 117,700 new positions, the demand for pharmacists is expected to drop by 3%, with a decrease of 10,500 positions. The same is true for medical transcriptionists who will be looking at a decrease of 2% or 1,300 positions. Also, keep in mind that healthcare statistics are not broken down into the different medical fields, such as oncology, nephrology, and geriatrics. What is the demand for healthcare positions in the various medical disciplines? In other words, are most of the expected 2.4 million jobs in healthcare solely within the geriatric field or will other areas of the medical field also be growing?

AMN Healthcare, a health care staffing company has summarized the increased demand for health care workers in an excellent on-line newsletter (2018), indicating that demographics is not the only reason for the demand for healthcare workers. They cite seven different reasons:

1. Healthcare spending continues to rise. It is expected that between 2010 and 2026, healthcare spending in the United States will have increased from \$2.6 trillion U.S.

dollars to an expected \$5.7 trillion by 2026, including pharmaceuticals, equipment, and technology, but labor will be the single largest cost for healthcare organizations.

2. Healthcare employment has been booming, and this trend is expected to continue. While healthcare growth may ebb and flow yearly, the overall trend in healthcare employment has seen a continual upward trend, even during the recession.
3. There is a growing gap of unfilled jobs. According to AMN, the BLS Job Openings and Turnover Survey (U.S. Bureau of Labor Statistics, n.d.) states the number of job openings in the healthcare industry continues to grow every month while the number of job hires has remained fairly static. There are three main reasons for this, the aging population, baby boomer healthcare professionals retiring, and the growing economy. This has led to a cumulative effect of far more job openings than qualified people to fill those positions.
4. Projected job openings are expected to grow each year. As previously mentioned, this field is expected to grow by 2.4 million positions from 2019 to 2029.
5. The leading demand driver is the aging population. AMN cites the U.S. Census Bureau (Ortman et al., 2014), stating the U.S. population over the age of 65 is expected to grow to 84 million by 2050, an estimated 21% of the total U.S. population. Also, because people over the age of 65 experience three times the number of hospital days compared to the general population and those over 70 experience four times the number of days, the need for healthcare workers will greatly increase. Adding to this, is the quantity and complexity of medical issues experienced by an aging population creating increased healthcare opportunities in a wide variety of medical fields such as oncology and podiatry.
6. Better economy means more healthcare demand. When the U.S. recession happened, many people lost their jobs and with their jobs, they lost their medical benefits. When the economy turned around, people returned to work and began using their healthcare benefits. This trend should also be true of those laid off during the COVID-19 pandemic, with the upcoming post-pandemic economic recovery contributing to an increased use of healthcare benefits.
7. The healthcare retirement wave has hit. According to a 2017 AMN survey of registered nurses (2017), the wave of baby boomer nurses retiring has already started. Also cited in the AMN newsletter is a 2017 survey by the American Association of Medical Colleges (Mann, 2017) that estimates that one third of practicing physicians will retire by 2030, leaving 100,000 positions needing to be filled across the country. Remember too that for succession planning, new graduates cannot replace the experience lost when senior healthcare staff retire, leaving major knowledge gaps in the field.

Both the U.S. Bureau of Labor Statistics (2020) and the AMN newsletter (2018), a leading healthcare staffing company support Etzioni's view that many workers replaced by automation could find a large number of available positions open to them if they choose to transfer into medical or healthcare professions.

In his article, Etzioni states that, "The many workers who are not interested in, or capable of, technical work could instead receive training and accreditation in a variety of caregiving

occupations.” To believe that the fourth industrial revolution will include jobs or careers that will not involve technical skills is very unrealistic. The vast majority of healthcare workers and others in caregiving fields already use computers and technical equipment in some part of their job duties. This use of technology will only increase in the future just as the use of computers has increased over time in all industries.

Everyone, including those in the healthcare profession, will continually need to increase their technical skills. To support this point, I will cover a different technology of the fourth industrial revolution and demonstrate how it is being used to enhance caregiving roles and the need for all professions, including caregivers, to be open and adaptable to learning new technologies. Let us start by looking at the use of drone technology in the medical field.

Drones and the Health Care Field

When people think technology and the healthcare industry, they are probably thinking artificial intelligence (AI) or big data, but lately drone technology is finding its way into the medical field. In an article for DoctorPreneur, Dragolea (n.d.) discusses nine drones revolutionizing the healthcare industry.

Seattle’s Village Reach and Matter Net, a Silicone Valley company, and Vayu Drones are in the business of transporting blood and stool samples, while Zipline transports blood for blood transfusions. Other drone companies, Flirtey, Google Drones, and Alphabet’s Project Wing, are using drones to deliver food, water, and emergency medical supplies to people in need of assistance, helping in rescue operations and post hurricane recovery. Companies such as Tu Delft have integrated cardiac defibrillators and two-way radios and videos into the actual drone to provide emergency help for bystanders to assist in cardiac emergencies until medical services arrive. Lastly, EHang has created a drone capable of transporting a human being for quick organ donation and distribution in emergency situations.

Certainly, drones will be used in each of the three areas touched on in the Dragolea article: aiding search and rescue operations, medical care, and transportation and delivery. An article by Tucker (n.d.) adds the delivery of blood supplies between hospitals, which cuts down delivery time, the delivery of medication to patients within hospital, and the delivery of vaccines and antivenom. Also, homecare workers doing on site visits can draw blood samples at a person’s home and ship the samples via drone to the laboratory for testing. Drones can also be used to deliver meals and medications to geriatric patients who are homebound.

As drones take on more tasks within the healthcare profession, such as in hospital medication delivery, we may see a decline in the number of healthcare staff needed. At the very least, these examples of drone technology within the healthcare industry demonstrate how caregivers may be using drone technology in their daily routines. As career practitioners, we will have to stress to our clients the need to stay adaptable and current in healthcare roles, not only in areas such as drone technology, but with other technologies as well. This will be a necessary part of staying employed in all industries in the fourth industrial revolution.

Child and Elder Care

Etzioni suggests that people replaced by automation would find work in caregiving roles and according to the U.S. Bureau of Labor Statistics (2020), we will be needing more people to work in both child and elder care in a variety of positions. Here is a list of the jobs that will be growing, the percentage of that growth, and the increase in the number of positions over the next decade (2019 – 2029):

Child care:

- childcare workers: an increase of 2% and an increase of 19,500 positions
- preschool teachers: an increase of 2% and an increase of 13,500 new job openings

Elder care:

- home health aides and personal care aides: an increase of 34% with an estimated increase of 1,159,000 positions

We will also see an increase in the number of human services positions that relate to caregiving and that support elder care:

- massage therapists: an increase of 21% and 34,400 new positions
- recreational therapists: an increase of 8% and 1,700 new positions
- recreation workers: an increase of 10% and 34,400 new positions

Another career area directly related to elder care is that of funeral services. Even though the U.S. population for those over 65 is expected to grow to be 21% of the total population by the year 2050, funeral services as a career field is expected to decrease by 4%, with 2,200 fewer jobs in the field by 2029 according to the U.S. Bureau of Labor Statistics (2020). The reason for this, according to the National Funeral Directors Association (2020) is that more and more people are opting for cremation and green funerals over traditional cemetery burials; therefore, fewer people are needed in the actual funeral service business. This is another example of how knowing your industry is key to good career decision making and career planning.

Technology is definitely impacting caregiving jobs. Wondering which technologies are impacting caregiving? Let us examine one technology being used in elder care: virtual reality (VR).

Virtual Reality and Elder Care

Virtual reality is a technology that allows us to live in another world while at the same time existing in our own. For example, GoogleVR allows us to travel virtually through the Grand Canyon without ever leaving our chair. More and more VR is being used in elder care. One reason is that VR is a very inexpensive way to give seniors living in long-term care facilities experiences they can no longer have in the real world. But are there other benefits?

MyndVR and senior facilities allow groups of residents to “attend” events such as a virtual Frank Sinatra concert. Participants feel like they are in a front row seat of the concert and experiencing events they may never have had the opportunity to do before. Rogers (2019) discusses how these experiences by VR companies allow whole groups of seniors to have shared experiences, giving the group something to talk about with each other. Thus, a major benefit of using VR is decreasing the isolation that many patrons feel within long term care facilities while increasing general interaction between fellow residents and staff.

Fischer (2019) states studies have also found that even patients with extreme dementia experienced increased mood, more social interaction, and improved memory with the use of VR. Fischer discusses how one such study with Dr. Ang, from the University of Kent worked with severe dementia patients, showing them 15-minute segments of natural beauty, such as forests, seascapes, or mountain scenes. Even weeks later, participants would draw seascape pictures based on their VR experience.

Rogers (2019) also discusses another benefit of using VR with seniors is the general improved quality of life for patients, including increased memory and adding joy to their lives. Many residents can experience items on their bucket lists, “travelling to see” the Eiffel Tower or London Bridge. VR allows people to revisit places they got married or where they served in the military, allowing them to remember details of these experiences they may have long forgotten. More importantly though, it is increasing their desire to socially interact with their care providers and share these remembered experiences with other people.

Viarama, MyndVR, Rendeever, VR Genie, and Virtual Exercise are five more companies doing work in VR and elder care. Virtual Exercise is being used in conjunction with stationery gymnasium equipment, allowing residents the ability to hike up mountains or bike in a forest. Users were much more motivated to actively exercise when it was combined with a VR experience (Rogers 2019)

While some technology replaces people in their work roles, VR appears to enhance the caregiving role, at least for workers in long-term care facilities. This suggests that displaced workers may also find work in the VR sector aiding elder care. For example, our truck driver may prefer working in VR sales versus working in elder care in a long-term care facility. As practitioners, we know it is our role to help displaced workers find the work best suited to their natural abilities and interests and not simply point clients to jobs positions that need filling.

Education

As we continue exploring the career opportunities available in caregiving roles and the human services industry, we can see from the U.S. Bureau of Labor Statistics (2020) that all schoolteacher positions will experience an overall increase of 4% growth for the next 10 years with the following increase in job positions:

- kindergarten and elementary school teachers: 56,100 new positions
- middle school teachers: 22,500 new positions
- high school teachers: 40,200 new positions

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- post secondary teachers: 121,500 new positions, an increase of 9%

All told, this would result in an additional 240,000 new job opportunities within the education field, supporting Etzioni's suggestion that caregiving will offer displaced workers new work opportunities. These positions, though, may be out of reach for many displaced workers because most education roles require at least some level of post-secondary education, and additional technology skills as new technologies enter the classroom. Which brings us to the use of augmented reality in education.

Augmented Reality in Education

Augmented reality (AR) is a technology that allows for more interaction between our world and the computer world. Imagine walking down the street with your smartphone. While you are walking, you watch your phone for upcoming stores to see store hours and review ratings for each store. How could this technology be used in the classroom?

Sagar (2017) discusses five reasons why AR is a must for classrooms and the upcoming generation:

1. better explanations of complex and abstract concepts
2. elevates student engagement
3. requires no extra technology tools
4. practical knowledge
5. provides accessible learning

Some examples of AR apps available for classroom use are Mathalive, Anatomy 4D, Arloom Plants, Starwalk, and Aurasma. Anatomy 4D allows students to examine the human body layer by layer, greatly increasing the understanding of the human body, their own bodies and how they work. Starwalk allows students to fix their smartphones at a point in the night sky and see an outline of constellations and the location of major stars. Augmented reality can also be used on field trips where museums have AR apps to enhance the learning experience. Simply point your smartphone at an object and details about that object appear on your phone, basically giving every student an entire encyclopedia's worth of information in their hand-held device.

Augmented reality will definitely be used more and more in classroom settings because every subject can make use of AR and also because the technology is more readily available with many of students owning their own smartphones. Anyone entering the education field will need at least fundamental technology skills to keep current in their industry.

Psychology and Social Work

Lastly, we examine the fields of psychology and social work to see if there will also be an increase in positions within these human services fields. According to the U.S. Bureau of Labor Statistics (2020) we are expected to see an increase in the number of positions in these fields over the next 10 years:

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- marriage and family therapists: growth of 22% resulting in 14,800 new positions
 - substance abuse, behavioral disorder, and mental health counselors: growth of 25% and an expected 79,000 positions
 - school and career counselors: growth rate of 8% and 26,800 new positions
 - social workers: growth of 13% and an increase of 90,700 positions

Over the next 10 years, we should see over 200,000 new positions in these career fields. Like healthcare and education, though, many of these positions will require extensive training, and displaced workers will not be able to just walk right into these jobs.

There is one job that does require less education in this career field, and that is the position of human and social services assistant. Like social workers and counselors, this job will also experience job growth: an expected 17%, with 71,500 new positions expected to be created.

As we can see psychology and social work, like other caregiving and human service industries, will indeed experience a growth in positions over the next decade and are a good bet for future career opportunities. While these are highly people-focused careers, as with the other human service career areas, we also need to examine how different forms of technology are being used in this field. For this human service field, we will examine how big data is being used.

Psychology/Social Work and Big Data

Harlow and Oswald (2016) state, “Big data involves the storing, retrieval, and analysis of large amounts of information.” As an example, “an academic researcher could select and analyze data based on student identification numbers from class records in several majors, where the GPA is less than 2.0. In turn, this could allow for the possibility of strategic data-driven interventions with these students to offer enrichment or tutoring that would bolster their grades and improve their chances of staying in school and succeeding.”

In their review of big data, they found little if any research in psychology or the social sciences using big data. They believe that “Psychology and the social sciences should be proactive and take advantage of a real opportunity in front of them,” and Grimm et al. (2017) agree. They explored how big data is being used in the field of psychological research and how the field should think about adapting research methods to use big data more often, taking advantage of this rich amount of data.

As psychologists and social workers are interested in human behavior, the use of big data in research makes sense; however, the profession seems hesitant to be using big data in research. Harlow and Oswald state,

Big data science can be instrumental in collaboratively working to uncover and illuminate cogent and robust patterns in psychological data that directly or indirectly involve human behavior, cognition, and affect over time and within sociocultural systems.

Harlow and Oswald present 10 studies within the psychology field that directly relate to using big data in research, and how practitioners can refer to these articles as guides to thinking about

using big data in their own research. Many of the articles focus on how using data from social media can highlight demographic trends or people's reactions to traumatic events. Mining Google searches can alert area psychologists to psychological trends, such as an increase in searches on suicide resources.

Data mining within the social sciences is a very new area of technology use to aid in exploratory data gathering. Within the next decade, as more social science researchers become comfortable using data mining, and as best practices become established, data mining will be integrated into the profession as part of research practice.

With data mining, we see that the social sciences, although late to the table compared to other industry sectors, will learn how to incorporate this technology into their practices, another example of how technology is being integrated into the field and how even psychologists and social workers will need to develop more technological skills over time.

Conclusion

In reviewing the future of work in the caregiving and human services industries, we can look again to our three questions and closing comments for each one.

1. Is there room within caregiving and other human services industries, to absorb the millions of people who will be displaced by automation? Certainly the 1.1 million new positions within the home health aide and personal care aide profession would support Etzioni's belief that caregiving roles can absorb some of the job loss that will occur as a result of automation. Statistics from the U.S. Bureau of Labor Statistics (2020) in the other areas of human services also supports Etzioni's argument that caregiving roles are a good bet when facing displacement. The additional question is, will it be enough positions? Certainly, we can expect there to be at least 3 million positions cumulatively that will need to be filled across the human services sectors by the year 2029. But again, will that be enough?
2. What will workers who are replaced by automation do for work, especially those who have little or no post-secondary education, and how can we best advise them? First, when we are advising our clients, we may want to consider salaries. While Etzioni is quick with an answer to worker displacements, he omits any discussion of wages. Let us look at our truck driver who has been replaced by an autonomous vehicle. Currently this position pays around \$21/hour according to the Occupational Outlook Handbook (U.S. Bureau of Labor Statistics, 2020). But if this person were to not do any retraining and becomes a child-care worker or a home health aide, they would be making around \$12/hour, almost one half of their current salary. Our worker would barely be making a living wage. We may have over a million home and healthcare aide positions coming up in the next 10 years, but will these jobs pay similar wages and be able to sustain families?

Secondly, positions in the caregiving fields are emerging that are not accounted for in the Occupational Outlook Handbook. One of these areas is geriatric care management. It

is not a healthcare position, as such. It is an advocate position for the elderly when they can no longer care for themselves, or when their families are struggling and looking for answers to many complex issues, including health, legal, and housing for their elderly family members (Bjerken 2019). These growing number of positions are in addition to the health aide workers who are employed by their companies. It is important to help clients explore up-and-coming career options, and to learn how to look beyond standard job titles.

Lastly, as career practitioners, we can direct some of these workers into the human services field if this is an area they want to pursue and if wages are in alignment with other considerations. However, we need to keep in mind that human services will not be the only areas needing people regardless of what Etzioni says. Technology will impact all industries, including the human services, and we will need workers to implement many of these technologies into the workplace. We will need people to sell technology, market it, and install it, creating jobs in other fields. For example, companies such as EHang are creating exciting new uses for drone technology using one-man drones for sight-seeing. These technologies will create whole new business ventures. Displaced workers will be able to explore a variety of career areas that interest them, and we need to assist our clients with this exploration. Caregiving roles could be considered when those positions are the best fit.

3. What will the impact of technology or the fourth industrial revolution be on the various human service industries? As we have seen, technology is impacting all areas of the caregiving and human service industries. Drones, AR/VR, and big data are impacting all areas of human services and there are many more technologies of the fourth industrial revolution that will impact not only human services but all industries. To believe that the technologies of the fourth industrial revolution will not impact human services because these are people-oriented professions would be naïve. It would be like believing that the computer would not impact human services 30 years ago. Just as the information age impacted caregiving and human services, so will the technologies of the fourth industrial revolution. As workers in this field, we also need to be open to using new technology and we need to encourage our clients to do the same.

In summary, while caregiving and human services may not be impacted by technology as much or in the same ways as other industries, technology will still impact human services even if it is in assistive ways. I agree with Etzioni, there will be a place within caregiving and human services to absorb some displaced workers. But salary may be an issue for some of those workers. Lastly, as practitioners, we will need to be aware of which human service jobs will be in demand in the coming years and which will be declining, but we also need to be aware of how people will apply their creativity and imagination to changing new technologies, creating exciting new career opportunities never imagined before in all industries.

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SECTION 2: WORKING IN THE FOURTH INDUSTRIAL REVOLUTION

CHAPTER 1: STEM CAREERS AND THE FOURTH INDUSTRIAL REVOLUTION: FILLING THE SKILLS GAP

By Rodney A. McCloy and Betsy M. Wills

The Skills Gap

Organizations understand today, perhaps more than ever, the importance of human capital. Talent acquisition, talent management, and talent development departments are mainstays of many larger organizations. Smaller businesses also understand the importance and challenge of identifying the right people for the jobs and roles they need to staff. We are hurtling through the third industrial revolution (the technological revolution) and have already launched into the fourth industrial revolution (the age of artificial intelligence, robotics, the internet of things, 3D printing, genetic engineering, quantum computing, and other technologies). The forecasted growth for occupations falling within the science, technology, engineering, and math (STEM) sector means that more and more jobs will require higher-level skills. Along the way, many employers seeking new hires have noted a dearth of candidates possessing the requisite knowledge, abilities, and skills that the new job market requires in ever-larger quantities.

This disconnect between the skills employers require and the skills potential employees possess has been labeled the skills gap (e.g., Marshall & Craig, 2019). The skills gap has been forecast to have rather dire economic consequences. A study by Deloitte (Giffi et al., 2018) reported that the decade spanning 2018 to 2028 could suffer 2.4 million positions remaining unfilled because of the skills gap, with a concomitant economic cost of \$2.5 trillion. The demand for higher-level skills is manifest in the Deloitte report, with the authors noting that occupations requiring digital talent, operational management, and skilled production could be three times as challenging to fill in the next three years (i.e., at present).

Not everyone believes the skills gap is real (e.g., Modestino et al., 2015, 2016; Weaver & Osterman, 2017). Regardless of your position on the legitimacy of a skills gap, it is difficult to argue against the claim that we observe rather disparate levels of representation of females and minorities in certain STEM fields. Even for this topic, however, one must be careful to determine which occupations are considered STEM occupations (i.e., which fields within STEM are in question). As Mark Perry of the American Enterprise Institute stated, the National Science Foundation considers psychology and social sciences as “sciences” and the Bureau of Labor Statistics considers “health occupation” jobs as STEM jobs, but the National Center for Education Statistics does not consider either psychology/social sciences or health sciences as STEM (Perry, 2018).

For example, according to a recent report from the Council of Graduate Schools (Okahana & Zhou, 2018), it would be incorrect to state that women are underrepresented in STEM graduate programs (see Table 1). More than half of female graduate students are in the health and medical sciences field, and they constitute more than three-quarters of that cohort. They also represent the majority of those seeking graduate degrees in the biological and agricultural sciences. In

contrast, females constitute approximately a quarter of engineering graduate students and a third of graduate students seeking degrees in mathematics and computer sciences.

Table 1. Total Graduate Enrollment by Broad Field (STEM) and Gender, Fall 2017

Broad Field	Men	Women	% Women
Biological and Agricultural Sciences	42,477	50,965	54.5
Engineering	119,770	40,370	25.2
Health and Medical Sciences	53,147	186,889	77.9
Mathematics and Computer Sciences	77,555	36,590	32.1
Physical and Earth Sciences	33,897	20,532	37.7
TOTAL	326,846	335,346	50.6

One way to address the skills gap and any underrepresentation in various careers—STEM or otherwise—is to maximize the availability of talent by ensuring all individuals capable of performing various high-demand professions realize they have the capacity to perform them. An important way to do that is to ensure people know the abilities, aptitudes, and skills they possess and what interests them. With this information, they can better understand the types of occupations that might best suit them.

Person–Job Fit

People want to find jobs that “fit” them well—jobs that (a) make use of their abilities, aptitudes, and skills, and (b) reward and reinforce their interests and values (e.g., Greguras & Diefendorff, 2009). Accordingly, the literature on person–job fit identifies two main types of fit between the individual characteristics workers bring to a job and the types of characteristics a job requires of and reinforces in its workers. These two types of person–job fit can be labeled abilities–demands fit and needs–supplies fit (French et al., 1982).

The first of these, abilities–demands fit (A–D fit; Edwards, 1996; Kristof, 1996; Kristof-Brown et al., 2005), concerns the extent to which a person has the knowledge, skills, and abilities (i.e., the “abilities”) that a job requires (i.e., the “demands”). Thus, it addresses the question, “Does the employee have the abilities the job demands?” Organizations like to hire with A–D fit in mind, because employees who possess the abilities demanded by the job are most likely to be high performers; they have the raw material needed to complete job tasks. In addition, the Theory of Work Adjustment (Bretz & Judge, 1994; Dawis, 2005; Dawis & Lofquist, 1984; Dawis, Lofquist, & Weiss, 1968; Lofquist & Dawis, 1969) hypothesizes that employees will remain in jobs for which their A-D fit is high. The tendency to stay in jobs for which your abilities meet the job’s demands could occur because people tend to find jobs more meaningful when they can use their knowledge, abilities, and skills to a high degree, which in turn leads to those employees being more highly engaged on the job (May et al., 2004).

The second type of person–job fit, needs–supplies fit (also known as values–supplies fit; Dawis, 1992; Edwards, 1992; French et al., 1982), concerns the extent to which a job can meet (or, as stated in the Theory of Work Adjustment, “reinforce”) a worker’s values, preferences, and goals. Thus, it addresses the question, “Are the worker’s needs and values met by the job?” Edwards

and Rothbard (1999) stated that needs “refer to the desires of the person and thus signify a general construct that subsumes interests [emphasis added], preferences, and goals” (p. 88). Supplies, on the other hand, are things the job offers that the employee may value or prefer, such as “pay and recognition, and intrinsic rewards derived from activities or experiences in the environment” (p. 88).

The better a person’s abilities match a given job, and the more a job can satisfy the values and preferences of that person, the more likely they are to remain in the job, remain highly engaged in their work, and perform their jobs well. That is, higher levels of person–job fit lead to a number of outcomes both employees and employers desire.

Let us consider job performance. A model of job performance proposed by Campbell and his colleagues (Campbell, 1990; Campbell et al., 1993; McCloy et al., 1994) identifies three key components of job performance, labeled as “determinants.” These three performance determinants are declarative knowledge (knowledge about facts, things, principles, a task’s requirements), procedural knowledge/skill (the successful combination of knowing what to do [declarative knowledge] with knowing how to do it), and motivation (defined by Campbell et al. as “a combined effect from three choice behaviors: (1) choice to expend effort, (2) choice of level of effort to expend, and (3) choice to persist in the expenditure of that level of effort,” p. 44).

The three determinants can be viewed through the lenses of maximal and typical performance (Sackett et al., 1988)—that is, how well an employee can do a job when maximally motivated, and how well an employee usually will do a job from day to day. Different individual characteristics (e.g., intelligence, personality) predict maximal performance compared to those that predict typical performance. For example, abilities and aptitudes tend to predict declarative knowledge and procedural knowledge/skill—the two determinants primarily associated with maximal performance (i.e., what a person “can do”). Abilities and aptitudes are less related to motivation to perform, which characterizes typical performance (i.e., what a person “will do”). Rather, motivation is better predicted by measures of personality and work values. Vocational interests are on the fence between the two, although they act slightly more like “can do” predictors (like abilities) than “will do” measures (like personality).

The important point here is that measuring a person’s abilities and aptitudes (what a person can do) and vocational interests (what a person likes to do) provides a more complete picture of what a person brings to the workplace and, therefore, a more complete picture of what types of careers that person might profitably explore and consider. The U.S. Department of Labor (2020) offers a Career Profiler system that can provide a rather full mapping of a person’s characteristics. The Department of Labor system features three “profilers” (the Ability Profiler, the Interest Profiler, and the Work Importance Profiler): assessments based on the “whole-person assessment” concept and that serve as career tools individuals can use to explore occupations within the Occupational Information Network (O*NET). The value of such whole-person assessment is that it provides a more complete picture of a person’s abilities, skills, values, and interests, with an eye towards helping them identify which types of occupations they might perform best and might satisfy them most.

Although one can easily argue that more information is better than less when providing career guidance to a client, whole-person assessment is hardly ubiquitous. Rather, most career exploration activities involve assessment of vocational interests alone (Leuty & Hansen, 2013). This may well be because the “lift” required to administer aptitude tests in particular (e.g., longer administration times, greater administration costs; cf. McCloy et al., 2020) is greater than that associated with administering vocational interest inventories.

The emphasis given to vocational interests is not without merit, however. Of particular note, interests differentiate between occupations better than do abilities, knowledge, skills, tasks, or personality variables (Putka & McCloy, 2011). Thus, if you can administer only one type of measure to help a person identify which jobs are best bets for them, you should administer an interest inventory. In addition, beyond doing the best job of distinguishing among occupations, vocational interests also predict important outcomes (Nye et al., 2019), including:

- occupational choice (Fouad, 1999; Hansen & Dik, 2005; Holland et al., 1994; Savickas & Spokane, 1999; Zytowski, 1974)
- job knowledge (Reeve & Hakel, 2000; Van Iddekinge, Putka, et al., 2011)
- job performance (e.g., Azen et al., 1973; Hough et al., 2001; McCloy et al., 1994; McHenry et al., 1990; Nye et al., 2012; Oppler et al., 2001; Van Iddekinge, Putka, et al., 2011; Van Iddekinge, Roth, et al., 2011)
- career success (Su, 2012)

Interests, however, involve subjective perceptions and interpretations. They are therefore influenced to no small degree by environmental factors, including societal norms concerning gender roles (Betz, 2007; Fassinger, 2005). This means that career guidance based solely on information about individuals’ vocational interests could perpetuate the gender gaps we observe in certain fields. There are well-known, longstanding sex differences in vocational interests, with males scoring higher on interests related to working with things instead of people, per Fine’s (1955) data/people/things theory and the concept of functional job analysis (Fine & Cronshaw, 1999) derived from it. Females show the opposite pattern. The STEM occupations with the fewest females tend to high on the “things” dimension (e.g., engineering). Health sciences, where the emphasis of many jobs is on caring and personal interaction, tend to contain a majority of females, and a majority of high-school girls tend to express interest in this field. The same is true for occupations in education (Rottinghaus et al., 2003).

But do the observed differences in interests between males and females arise strictly from external influences? Would a behaviorist’s perspective apply here, with interests being cultivated by whichever behaviors are reinforced by a person’s environment? Probably not entirely. For example, research has demonstrated that interests have a substantial heritable component (Betsworth et al., 1994), suggesting that it might be that a person’s inclinations to prefer certain activities lead to cultivation of certain skills and the expression of certain aptitudes and abilities.

The Importance of Using Aptitudes and Interests to Inform Career Exploration

And what about aptitudes? Should we not also assess a person’s aptitudes and thus ascertain their capacities to perform certain tasks more easily and successfully than other tasks? And, would it

not also follow that a person who understood they had the capacity to perform activities relevant to occupations less represented by their gender might be more willing to consider such careers as promising opportunities?

When a person understands which aptitudes are strongest in their makeup, it brings clarity and direction. At developmental inflection points such as puberty/high school, there is an even greater dividend: confidence. The power of suggestion can be strong. If people know they have the potential to do something, even if their role models are not doing it, they will be much more curious to check it out. After all, it could be quite difficult to become interested in occupations one knows nothing about. Exposure to various careers and activities that take advantage of an individual's aptitudes helps foster the interest needed to feel motivated to learn and practice.

A more holistic assessment of people engaging in career exploration provides a more complete picture of a person's capacity for fit to any given occupation. Supplementing interests with aptitudes has demonstrated capability for increasing occupations for exploration in non-traditional areas for boys and girls alike.

In a report detailing results for 53,303 students in the state of Georgia (YouScience, 2020), researchers examined the top 50 most frequent career matches (of 500 careers) based on (a) interests only and (b) aptitudes only. For interests only, 72% of recommendations involved arts and entertainment, education, social work, and life sciences. Only 18% of the top 50 interest-based recommendations involved careers in high demand (e.g., architecture and engineering, healthcare, information technology, construction, manufacturing, and transportation and logistics). In contrast, for aptitudes only, just 6% of the recommendations steered students toward social and artistic careers, but 62% of such recommendations involved high-demand careers. Thus, the types of occupational options presented to our youth can vary greatly as a function of the individual characteristics assessed for that purpose.

Similarly, McCloy et al. (2020) reported data collected from more than 7,000 high school students across 14 states using the YouScience career exploration system, which comprises an interest inventory and an aptitude battery. These data show marked sex differences on vocational interests (as expected) but minimal sex differences for aptitudes. That females possess nearly the same mean levels of aptitudes as males has been reported elsewhere. For example, a report from the California Community Colleges (n.d.) states, "It is not females' cognitive abilities that are falling short in science, technology, engineering, and mathematics (STEM). At the elementary, middle, and high school levels, girls today are equally or more likely than boys to take science and math classes, and they earn slightly better grades in those classes. However, in early-adolescence girls begin to lose confidence in math and science despite their performance, representing a shift in attitudes as opposed to ability" (p. 1). If adolescent girls knew more about their aptitudes and where their strengths lay, the confidence that ensued from such knowledge might help reduce this disparity between their possession of the capacity and their lack of confidence in it.

Perhaps not surprisingly, these different patterns of scores on interests and aptitudes led to differences in career fit across five high-growth occupational groups, depending on which set of variables was considered. Specifically, when fit for occupations in five high-growth occupational

groups was based on interests, high school boys showed higher fit than high school girls for occupations in computer technology, manufacturing, construction, and health care–technical (Table 2). Girls indicated greater interest in health care–direct patient care than did boys. The differences were muted or even slightly reversed when aptitudes were considered. Thus, consideration of aptitudes helps girls realize they have the capacity to perform many high-growth occupations traditionally dominated by boys.

Table 2. Gender Differences in Percentages of Students Showing High Interest and Aptitude Fit, by Occupation

Broad Field	Interest Fit		Aptitude Fit	
	Boys	Girls	Boys	Girls
Computer Technology	52	30	57	58
Construction	45	7	56	51
Manufacturing	49	13	53	54
Health Care-Patient	39	63	61	64
Health Care-Technical	36	7	61	56

Timing is also a critical factor since the post-secondary pathways are often gatekeepers for STEM careers. The timeframe for developing foundational skills necessary to a meaningful STEM career pathway is brief. The academic prerequisites that are building blocks for accessing admission into many STEM programs coincide with the often-volatile struggle for identity present in the high school years. For many at this age, the desire for acceptance is strong and may dampen any willingness to explore beyond what is familiar. One could argue that one or two academic courses in math or science at this inflection point of development is all that is required to foster a student’s lifelong view of themselves as capable of success in STEM fields. Ensuring that students with aptitudes for STEM careers are aware of their potential and are supported at the right time in their personal development is essential.

The changing nature of work is another consideration. For example, a traditional career in the arts would include graphic design. Today, programming and other technical toolkits are fundamental in this field. Likewise, auto mechanics have only recently been classified as a STEM career. Mid-career individuals who straddled old and newer technology have been forced to retrain or risk obsolescence. For the individual who derived satisfaction from hands on work, the loss may be significant even if they are able to successfully adapt to the new tools.

Filling the Gap . . . But Not Eliminating It?

Assessment of both aptitudes and interests is likely to narrow the skills gap, and we promote its widespread adoption as a means of helping students and adults identify promising, well-fitting occupations. Nevertheless, we do caution that it seems unlikely this step alone would be sufficient to eliminate the gap. Interests are about choice. If biases concerning workers of one particular gender are in play in certain areas of the workforce, it still could be that eradicating those biases would not result in a 50/50 split of men and women across the majority of occupations. Recent evidence to this effect comes from a study by Stoet and Geary (2018) showing that nations scoring higher on an index of gender equality have lower percentages of women among STEM graduates and vice versa. Describing their research, they wrote: “Using an

international database on adolescent achievement in science, mathematics, and reading . . . we showed that girls performed similarly to or better than boys in science in two of every three countries, and in nearly all countries, more girls appeared capable of college-level STEM study than had enrolled. Paradoxically, the sex differences in the magnitude of relative academic strengths and pursuit of STEM degrees rose with increases in national gender equality” (p. 581).

Thus, equal aptitude will not necessarily translate into equal interests. Assessment of aptitudes along with interests offers the potential for girls to be encouraged to explore STEM jobs based on their capacity, but it remains for their interest in these fields to grow, and it simply might not. Again, from Stoet and Geary (2018): “Our analysis suggests that the percentage of girls who would likely be successful and enjoy further STEM study was considerably higher than the propensity of women to graduate in STEM fields, implying that there is a loss of female STEM capacity between secondary and tertiary education” (p. 590).

Also, it is one thing to spark girls’ interests in occupations where they have been underrepresented but another for them to remain employed in those occupations. Attrition from STEM occupations has been an active area of research (Glass et al., 2013; McKinnon, 2016; Turk-Bicakci & Berger, 2014). Numerous reasons have been cited, including poor or inequitable pay, poor working conditions, lack of work/family balance, underutilization of science and math skills, and lack of recognition and advancement opportunities (Fouad et al., 2017). In addition, it is worth noting that attrition rates of workers in STEM fields after having their first child are high for both women (43%) and men (23%; Cech & Blair-Loy, 2019). Filling the skills gap will require us to ensure we strive to mitigate the job elements that lead to high attrition rates from these occupations for both women and men.

We also need to be careful about exerting undue pressures in the other direction, which could lead girls to enter occupations they feel they should enter but are not particularly interested in, even though they may possess the aptitudes and abilities for performing them. This unfortunate circumstance is the perfect storm for creating “burnout skills”—skills that people perform well but do not enjoy performing all that often. For example, you might be that person in your office who is quite adept with computers and their idiosyncrasies. Such a person could frequently be tagged with requests for assistance from their less knowledgeable coworkers to help with computer plights when the IT desk is overwhelmed. Being adept at skills relevant to an occupation does not mandate one would like to exercise those skills in an occupation on a regular basis. Doing so could easily lead the person to burn out, with little satisfaction being experienced along the way.

Either way, students/workers need to be free to explore the occupational endeavors they find most enticing (see Cummins, 2015). Pressure to fit individuals into roles for which they are capable but disinterested can readily lead to burnout. Indeed, this could be another contributing factor to the “leaky pipeline” that has served to characterize women in STEM careers.

Conclusion

Increasing opportunities for and awareness of women in STEM will not necessarily lead to a 50/50 split of men and women in mathematics and engineering. Thus, more generally, expanding

career exploration activities to explicitly attend to both vocational interests and aptitudes should ameliorate the skills gap, but it will be unlikely to eradicate it. Nevertheless, it seems clear that career exploration based on a more complete view of what people can do and want to do holds promise for expanding the choices of occupations to explore and thereby increase the number of qualified candidates for employment from which employers may draw. Assessing aptitudes and interests, as is currently performed by career exploration platforms such as YouScience, the Career Profiler tools offered as part of O*NET (U.S. Department of Labor, 2020), and the Armed Services Vocational Aptitude Battery Career Exploration Program (U.S. Department of Defense, 2020), provides a win/win for job seekers and hiring managers. The result might not be proportional representation of all subgroups across all occupations, and it might not lead to absolute maximization of talent in the candidate pool across the economy, but we believe there is substantial promise for a large reduction in the skills gap that vexes so many organizations today. Improved career exploration practices stand at the ready to usher in what could be the fourth industrial revolution—a richly deployed workforce.

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CHAPTER 2: LEADERSHIP DISRUPTED: RE-SKILLING LEADERS TO THRIVE IN THE FOURTH INDUSTRIAL REVOLUTION AND BEYOND

By William J. Huffaker and Anita L. Gombos

The disruption of the coronavirus pandemic has delivered potential benefits that businesses, leaders, and career development professionals will realize as time goes on. Instead of reaching for legacy leadership practices, the pandemic required more inventive and resilient ways to harness employee skills scattered across multiple households. Further, the sheer volume, velocity, and ferocity of the COVID-19 pandemic brought to light latent systemic cracks of unpreparedness and inadequacy that, though tolerated and unaddressed in the past, now demand attention and resolution. Simultaneously, the need remains to respond successfully to global trends that continue to reshape the world.

Periods of chaos prove to be either creative or destructive, offering opportunities for innovative thinking that can translate to significant directional change, structural retooling, and redefined measures of success. This article offers a context for understanding the changes, addresses global trends that will continue to impact businesses post COVID-19, identifies the must-have skills of effective leaders, and suggests a path forward for career development professionals.

Industry Evolution

By researching the forces that drove manufacturing industry development, social scientists and industry experts identified four primary periods of technological expansion that powered its evolution (Boston Consulting Group, 2020). As early as 1784, technology transformed the landscape of work and ushered in Industry 1.0, a time of mechanization, steam power, and time-saving innovations such as the weaving loom. The assembly line, mass production, and electrical energy launched Industry 2.0 in 1870. In 1969, automation, computers, and electronics propelled the world into Industry 3.0. Today, cyber-physical production systems, the internet of things, and vast networks are emblematic of the fourth industrial revolution, or Industry 4.0—technological advances that have pioneered a new business paradigm enabled by technological innovation. Obviously, the evolution will not stop there.

The first three industrial revolutions advanced in approximately 100-year periods. However, the jump from the third to the fourth revolution, where we are today, took fewer than 20 years. Some analysts believe that Industry 5.0 is on the horizon, with less emphasis on technology and more on a collaboration between humans and machines, combining the powerful accuracy of technology with the unique creativity and cognition of the human evidenced in better-trained experts (Ozdemir & Nezh, 2018).

Moore's Law, which is understood as more a general guideline than a de facto rule, states that computing power will double every 18 to 24 months. Moore's Law was widely accepted and remained relatively unchallenged until 2019 when a tipping point was reached. Companies found

that developing and launching sophisticated global technology at the previous rate had become financially prohibitive (Moore's Law Is Dead, 2020). Despite an anticipated slowdown in technology research and development, the interval between Industry 4.0 and the emergence of 5.0 will most likely be even shorter.

Undoubtedly, digital technologies will continue to transform every aspect of industrial production to enable greater process flexibility, expanded productivity, sustainable revenue growth, and improved product and service quality. Boston Consulting Group (2020) tracked Industry 4.0 imperatives that companies must address to respond to the rapid, even dizzying, pace of market change, including:

- the deployment of autonomous robots in work processes
- wider use of simulations
- more extensive system integration
- broader application of the internet of things
- amplified cybersecurity risks
- on-demand cloud computing
- additive materials manufacturing (3D printing)
- augmented reality across multiple modalities
- the utilization of big data

Speed, connectivity, complexity, demand—all hallmarks of today's 4.0 landscape. By 2025, there will be 1.4 billion 5G-connected users, accessing 100 times more data speed, on devices with one-tenth the connection delay (EY, 2020). Like training for a high-stakes event, our leaders and emerging leaders can prepare by learning and practicing advanced leadership and digital skills. By raising their awareness of the inevitability of ongoing technological progression and its attendant disruption, practitioners can support their transition.

Electrical Change: When People Meet Technology

Electrical change, the type of change that creates buzz and either lights up or shorts out a system, can become destabilizing events when technological breakthroughs surge in quick succession, or when a system is unexpectedly overwhelmed and company operations stutter. The coronavirus was one such change—an event of volatility, uncertainty, complexity, and ambiguity (VUCA)—with implications that demanded recognition and management. If you are not familiar with VUCA events, here is a thumbnail.

After the collapse of the Soviet Union in the early 1990s, the US Army War College devised the VUCA acronym to describe the aftershocks of a long-standing political climate suddenly disrupted by change (Bennett & Lemoine, 2014). In its wake, VUCA rushed to fill the vacuum. The cold-war playbook, which had so reliably fashioned domestic perceptions and prescribed military and intelligence responses, was tossed. By necessity, this led to new ways of thinking about and engaging in Russian diplomatic relations.

The VUCA acronym is now used extensively within the business community. Shorthand for describing the after-state that follows significant change, often sudden and unexpected, a VUCA event disrupts business and demands a directional shift in both thinking and operating. In an increasingly complex world with the heightened potential for VUCA incidents, it is helpful to understand the primary sources of disruption. These threats are real, as evidenced by the spontaneous global marches and protests that were part of the coronavirus pandemic's fabric. Among the ongoing issues are wealth distribution, education, infrastructure, government, geopolitics, economy, public health, demographics, media and telecommunications, and environment (Future Today Institute, 2020). Desiccated by lack of real change over long periods of time, some of these issues are bone-dry and almost fossilized. Recently, the world has witnessed how long-term hopelessness or denial of rights can explode into violence with the match of a single action unless meaningful attention is given to much-needed change. We have truly arrived at an inflection point where leaders in all societal sectors are called to make choices based on more than economic or political gain.

Volatility, uncertainty, complexity, and ambiguity—as a career development professional, you already know how to coach leaders to rise to the challenge of each. More difficult, though, is upskilling leaders to manage all four aspects simultaneously. When a perfect storm erupts, deep-seated fears and insecurities often flare up as well, and the natural first instinct is one of self-preservation, to hunker down until the storm passes. For individuals, this may work for a while, but by the very nature of their positions, leaders must quickly regain their inner balance to stabilize their teams and, ultimately, their organizations.

Peter Drucker, the well-known management consultant who helped establish the structure of modern business said, “The greatest danger in times of turbulence is not the turbulence – it is to act with yesterday’s logic” (Drucker, 2011). As he suggests, this VUCA moment and the full transition to Industry 4.0 and then 5.0 will be achieved not by extruding new ideas and structures from the remains of old, calcified thinking, but by reimagining a workplace that inspires perceptual change and an accelerated expansion of needed skills. Leadership know-how is critical.

External Analysis: The Humanitarian View

We need to act now before the point of no return is reached for climate change. Oceans are heating 40% faster, the sea level is rising 57% more rapidly than in the past, Himalayan glaciers are melting 100% more quickly, and Greenland’s ice cap is melting 670% faster (EY, 2020). Undoubtedly, climate change alone will create an avalanche of VUCA events over the next two decades with environmental disasters and increased violence.

Responding to these environmental and human crises, the United Nations challenged member countries to reshape their thinking and focus on key initiatives that would achieve humanity’s common goals. With the objective of leaving no one behind, the United Nations published *Transforming Our World: The 2030 Agenda for Sustainable Development* (2015), with five primary focuses: people, planet, prosperity, peace, and partnership, supported by 17 universal goals:

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1. no poverty: economic stability with resilient recovery following disasters;
 2. zero hunger: access to food with an end to malnutrition;
 3. health and well-being: consistent caretaking of both people and the planet;
 4. quality education: knowledge and skills for sustainable development with unbiased access for all;
 5. gender equality: equal protection and rights by law and in behavior;
 6. clean water and habitation: water quality and integrated water management; sanitation access;
 7. affordable and clean energy: shared renewable energy; energy availability and efficiency;
 8. decent work and economic growth: safe work environment; sustainable consumption and production;
 9. industry innovation and infrastructure: sustainable, resilient infrastructure that supports people and the planet;
 10. reduced inequalities: guarantee of equal opportunities for all in every societal arena;
 11. sustainable cities and communities: access to green space and safe transport; resolution to issues of housing, air quality, and waste management; disaster prevention;
 12. responsible consumption and production: chemical and waste management; education and promotion of sustainable lifestyle;
 13. climate action: climate resilience and adaptation; climate change education and capacity;
 14. life below water: marine and coastal management; elimination of pollution; marine and coastal area conservation;
 15. life on land: land conservation and restoration; preservation of natural habitats;
 16. peace, justice, and strong institutions: public access to information; participatory decision-making; effective institutions; equal access to justice; and
 17. partnerships for the goals: finance; technology; capacity building; solutions for systemic issues.

The agenda, of course, is aspirational, and one might wonder how these universal goals are relevant to business. Remember that people vote with their money, and now after the coronavirus crisis, people and groups will begin or continue to address societal, business, and political system issues that became so evident during the pandemic.

The United Nations' agenda is, at heart, the human agenda. Increasingly, consumers buy products and services that align with this agenda, with their human values. If corporations fail to account for international humanitarian concerns delivered in the United Nations' 2030 Agenda, perceived indifference can pose a reputational risk to the company and, in the long-term, potentially impact consumer sales. A company's social justice position is no longer a nice-to-do, but a need-to-do. This "new organization" is a purposeful one and is required to play a role in mending the social fabric. Leaders will be held accountable by an array of metrics, unrestricted to solely those that measure shareholder return (Mayer, 2018).

External Analysis: Global Megatrends

Ernst & Young (EY, 2020) pinpointed eight cross-industry megatrends that will impact organizations in 2020 and beyond. The report's first page poses an intriguing question: "Are you reframing your future or is your future reframing you?"—a good discussion-starter for the next strategic planning meeting. Consider the following trends' impact on the organizations that you support:

1. **Techonomic cold war:** observable economic changes caused by competing technologies, particularly in global governments and organizations. Populism, trade disputes, technology arms race, and cyberattacks have become all too common. However, the objective is not the traditional targets of infrastructure, data, or money, but an assault on truth itself. There is a war on facts in the spread of divisive disinformation and in the sowing of discontent.
2. **Decarbonization:** reduced carbon emissions resulting in demonstrable economic gain. More companies are becoming green in a move that is both social and financial.
3. **Behavioral economy:** individual and institutional behaviors at variance with economic theory and consequently, indicating a shift in consumer decision-making. Data is now the new commodity, displacing oil, and behavior is the new data. Companies are the great shapers of consumer behavior, so amid great mistrust produced by successful disinformation campaigns, transparency, and company and leader honesty are central to sustainable success.
4. **Synthetic media:** artificially produced, manipulated, or modified mass media messaging, typically generated using artificial intelligence (AI) algorithms. Between 2007 and 2017, authentication patents increased 276% in response to cyber risk (EY, 2020). Protecting customer data has become more essential than ever.
5. **Future of thinking:** a method for anticipating significant future changes in all areas of society impacting consumers and workers. Look for AI applications and autonomous vehicles to become more ubiquitous.
6. **Work and life unbounded:** the dissolution of boundaries between work, leisure, and learning, fundamentally reshaping institutions and norms. As conventional boundaries disappear, more desirable holistic living can be achieved. Lifelong learning, much of it experiential, will replace established colleges and skills certifications learning channels.
7. **Microbiome:** creating innovative, cross-industry opportunities by harnessing the capabilities of microorganisms to resolve the most challenging global issues. Since the human body houses a system of microbiomes in the gut, research will lead to more advanced treatments.
8. **Synthetic biology:** capability to read and rewrite genetic codes. In a prescient statement, Steve Jobs stated, "The biggest innovations in the 21st century will be at the intersection of biology and technology" (Isaacson, 2011). The pace of these innovations compounds exponentially.

Within the global community, business is no longer expressed as a single note routinely played repeatedly, but has evolved to a multi-note production, either symphonic or cacophonous. Trends cannot be uniformly put to music, and to distinguish themselves, companies must set their own rhythm, tone, and texture without losing core audiences who are always listening.

External Analysis: Key COVID-19 Technology Trends

The pandemic period was more than streaming shows and movies, snacking, and adding the COVID-19 10 pounds to the waistline. People had time to think further than what worked pre-pandemic and test innovative ideas for moving beyond the routine to address the needs of a world turned upside-down. Real changes and refinements to existing processes happened, attributable in large part to pandemic response. The list is long and will most likely get longer as time passes. Among them are robot deliveries, contactless payments, remote working, distance learning, telehealth, online entertainment; 3D printing, drones, and 5G. (Xiao, 2020).

Why are these post pandemic trends so important? The World Health Organization declared the coronavirus a global health emergency on January 30, 2020. Then, in a very short period, unprecedented gains were made amid tragic losses. Time, autonomous scheduling, thinking space, and exigency became part of the formula that made the gains possible, factors to consider when coaching leaders.

What will our new normal look like? Technology's "S-Curve" is a simple graphic that demonstrates the evolution of technological development, launch, adoption, and integration. The S-Curve begins slowly during development, enters an acceleration phase after it launches and matures, and concludes when the curve flattens or plateaus with widespread adoption. The plateau is a necessary step, allowing time for changes to be integrated and, at the organizational level, for tracking performance improvements. Given the rapid acceleration of innovative technology, futurists predicted that the post-pandemic curve would bypass the usual initial development and slow-growth phase because the pandemic sped up those stages and continued to the rapid acceleration phase of product and process adoption (EY, 2020).

Implications for Leadership

Leaders are operating in an ecosystem of disruption. The nature of work, the worker, and the workplace is changing and, therefore, the nature of leadership is morphing as well. As workflow becomes increasingly managed by the evolution of digital transformation, a higher bar is set for greater collaboration among agile teams in dispersed locations. Further, since life expectancy increases every year, employees will work beyond today's typical retirement age. Therefore, with inexorable technology revolutions and their impact on jobs, re-skilling leaders and employees—both early-career and late-career—will become even more mission-critical.

A preview of this trend is found in the current platformization of work, where a full third of tasks performed in 60% of today's occupations could be automated immediately—and over time, will be (United Nations, 2015). And, of course, whether you love it or hate it, AI will become an increasing presence. Work performed by humans, then, will increasingly require more sophisticated digital literacy and high cognitive skills to perform non-routine tasks—skills that

are even now are in great demand. These shifts will fundamentally change the way work is performed and spotlight the new workforce that is emerging.

By 2024, 75% of employees will be from the millennial generation who already have reframed workplace principles to those incorporating values-based decision-making, autonomy, and personal wellness (Robison, 2019). Ongoing emphasis will be placed on diversity, equity, and inclusion. For example, if people work longer, ageism in the workplace will need to be addressed. Also, there must also be increased attention on intersectionality—a theoretical framework for understanding how an individual’s social and political identities can engender modalities of discrimination and privilege (Crenshaw, 1991). With new job creation and shifts in the architecture of many of today’s jobs, talent will migrate to other positions both within and outside the company and, in some instances, this movement will produce real churn that leaders will need to manage, often through the greater use of a contingent workforce (Gartner, 2020).

One of the pandemic’s technological outcomes is accelerating the workplace of the future. Employees seek more than just a job, but a consumer-grade work experience. Flexibility will be key in providing that—offering mobile applications and journey maps to curate the employee’s experience across the talent lifecycle. Traditional corporate headquarters will reside in the cloud, presenting live-where-you-want options, though one in six employees will still work from home at least two days a week (Gartner, 2020).

These projections do not connote a workplace evolution, but a true social revolution that was accelerated by COVID-19. Within the evolving organizational and industry structures, leaders need to adjust to the post-COVID-19 world.

To help them effect that change, consider implementing a talent infrastructure customized to current and projected employee and organizational change. The structure is derived from extensive analysis of organizational change readiness, measures of meaningful communication effectiveness, and assessment of project management skills and capacity. Appoint an executive sponsor who has great organizational appeal and influence.

Once approved, the change continuum begins with firing up employees and leaders through an inspiring vision of how, for leaders, the change will make it easier to more equitably and effectively manage their talent resources. For employees, access to digital career tools to manage their careers would be welcomed. The vision will pave the way for the new model’s acceptance and adoption, so consistent and cogent communication on multiple platforms is crucial.

Designing an overall change methodology is equally essential because the adoption of any process always occurs within a community of people whose opinions about the change have impact. Therefore, creating a work environment where change thrives and realizes new ways of working is key, though, hopefully, a robust change culture already exists within your organization.

In summary, what key role do you play in the development, launch, and adoption of the new talent infrastructure? Essentially, you manage the talent S-Curve from infrastructure design through performance measurements. Of course, this work is an outgrowth of your support of

leadership upskilling, and this leads to the obvious question: What skills do leaders need in a vastly accelerated, highly technological Industry 4.0 world?

Leadership Skills for Industry 4.0 and Beyond

Leadership in Industry 4.0 and beyond will be equated with digital leadership, requiring leaders to function in a rapid, cross-hierarchical, team-based environment based on cooperation and with a strong bias toward innovation. Design thinking, a methodology for solving complex problems and finding desirable solutions, is action-oriented and helps leaders envision and create a preferred future. Primarily, both company and leader mindsets must change for this evolution to become institutionalized and operationalized. Indeed, Industry 4.0 requires a new way of thinking.

Obviously, the key to managing the groundswell that change causes is for leaders (and you, their coaches) to understand why the change is necessary. Understanding the imperatives that drive transformation can move leaders from functioning as reactive victims at the mercy of change and transforming them to active agents of the change process itself.

As leaders adapt and respond to what is needed for change, they will need support in establishing and modeling a cooperative work environment. Then, as leaders prove to themselves that they are capable of effecting organizational change, their confidence inspires teams to align with them and the organization's new direction. Leaders are called upon to continually "evangelize" the vision and purpose of their organization. In an increasingly VUCA world, employees look to their leaders to help make sense of organizational shifts and to connect their work with a higher purpose than the profit motive. Leaders themselves will be required to focus on their own mindfulness if they are to maintain perspective and inspire employee innovation.

Therefore, given the extraordinary level of change that is necessitated, it is incumbent upon leaders to develop a level of self-mastery, to demonstrate the holistic integration of body, mind, heart, and spirit as they perform the technical tasks of their positions. Industry 4.0 leaders simply need to know more. They need to stay up to date on the latest information within their professional discipline, technological trends, and customer expectations. Learning agility, fueled by innate curiosity and lifelong learning, is an essential element of leadership 4.0.

Over the past several decades, companies have put greater attention on establishing a work environment that balances both business and personal needs. Holistic wellness programs addressing the essential health of the whole human are both promoted and offered. A number of these companies have on-site fitness centers or include gym memberships in benefits offerings. Company-sponsored classes for stress reduction, smoking cessation, yoga, and healthy food options, to name a few, address foundational physical and emotional needs. Increasingly, leaders will be called on to support their employees' social, financial, career, and physical well-being. To do this well, they likewise must cultivate resilience in themselves and meter their energy within a VUCA environment in continuous flux.

Finally, a holistic Industry 4.0 leader will seek to engage the hearts of employees. All eyes will be on leaders who will be challenged to lead with courage, authenticity, and renewed optimism.

They will increasingly be called upon to help employees build a network of relationships, fostering a sense of belongingness and connectiveness in an increasingly distributed workforce. Leaders with high emotional intelligence will be rewarded for their ability to adeptly foster trust and inclusion in an evolving workplace where, to serve a common purpose, teams quickly form and disband.

A Word about Artificial Intelligence

Movies track and often anticipate the culture's response to any significant change, and this is true for the love-it-or-hate-it relationship with AI. The classic space movie 2001: A Space Odyssey formulated the template for future movies, such as The Terminator series, that cast doubt and raised fears about AI's exploitation of humans. Other movies like WALL-E and A.I. presented a much more positive image, though when searching for titles, it is far more difficult to find movies featuring AI protagonists that love humans. Perhaps the movies you watched when you were younger have created either an excitement or a dread of AI's taking a more dominant role in a company. Certainly, many leaders are concerned about being replaced by robots.

In August 2020, Time magazine published "Millions of Americans Have Lost Jobs in the Pandemic—And Robots and AI Are Replacing Them Faster Than Ever" (Samuels, 2020); however, there are also accounts of AI creating more jobs. So, which version of AI and jobs is correct? Well, both.

Yes, jobs have been lost during the pandemic and yes, some of them are now being performed by AI. But look at the technology trends to date (Autor et al., 2020). Jobs are lost, but new jobs are created. The big bump in both population and workforce that the baby boomers created is almost gone. Generations with a smaller number of workers are entering the workforce and will become the dominant force within just a few years. And think about the composition of the changing workforce. Fewer people will be needed to perform the same jobs as before, but because of this technological surge, even more people will need to fill new jobs. Attempting to recruit for key positions with workers who simply do not exist is inevitable. Enter AI. AI will complement, not replace and take over. So, will leaders disappear? No, and let us look at why.

Robots can think. Some even appear to feel. While AI is intelligent, it is not human with a human's ability to generate innovative, new ideas. Thinking beyond zero-one programming and linear logic, humans can be inspired, a state that triggers thoughts beyond the logical and ordinary. Humans can use active imagination to envision what has never been dreamed of before.

It is a human who programs AI and, essentially, turns it on. Consequently, humans have the power to also turn AI off and along the way, to resolve any AI issues that other humans encounter. Machines—and AI robots are machines—need monitoring, evaluating, and tweaking. (To give robots their due, so do some humans.)

It is true that during each industrial shift, jobs were lost, and Industry 4.0 will be no different. However, just as jobs were lost, remember that new jobs were also created. Leaders must decide if they will either keep coasting in predictability or proactively upskill and remain relevant. You can coach leaders, but not command. Whenever there are groups of people working in

companies, leaders will be present, though albeit the leaders of tomorrow will function much differently from the leaders of today.

If your leaders are fearful of AI, ask them why. Find out what still causes their fear to bubble up. If you discover that their fear arises from their potential obsolescence, then you can direct them to opportunities they might pursue to remain current. The rest is up to them.

Conclusion

Though there is much talk of “things going back to the way they were” pre-pandemic, that simply will not happen. The coronavirus has irreversibly changed the way business is conducted and has clarified for many their core values and how they choose to live them. The seeds of monumental change had already been planted long before the pandemic, and it simply began to be evidenced in technological breakthroughs in an extraordinarily brief time period. Even the timeline for developing the coronavirus vaccine was speeded up, and a process that would normally have taken a decade was completed in less than a year. Expect this velocity of change to remain.

Realize that many common elements of “normal” life that were comfortable and known have spun into forms that, at times, are almost unrecognizable, and this pattern will continue. As Industry 4.0 quickly becomes 5.0, both leaders and employees must choose whether they will be crushed by the wave of change, or like a surfer, experience the exhilaration inherent in the ride.

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CHAPTER 3: CAREER DEVELOPMENT, ACADEMIC INTEGRITY AND COUNTERFEIT CREDENTIALS: UNDERSTANDING THE CONNECTIONS

By Sarah Eaton

Career Development, Academic Integrity, and the Importance of Quality Credentials

The purpose of this article is to highlight ethical aspects of career development through the lens of academic integrity. I begin with an overview of academic integrity and the fundamental values that underpin it. Then I discuss fake and faulty academic credentials, including degrees, diplomas, transcripts, and related documents. I explore the impact of fake credentials on society, highlighting a few significant examples that have been featured by mainstream media. Finally, I examine the role that career development professionals play in promoting academic integrity and professional ethics to their clients. I conclude with concrete recommendations for career development professionals to inform themselves and their clients, and in doing so, to become partners in integrity and advocates of ethical education.

Overview of Academic Integrity

Academic integrity is grounded in a set of six values: courage, fairness, honesty, respect, responsibility, and trust (International Center for Academic Integrity [ICAI], 2014). (See Figure 1).



Figure 1: Six Fundamental Values of Academic Integrity (adapted from ICAI, 2014).

When we talk about academic integrity, we are talking about upholding and enacting these values through ethical behavior. The term “academic integrity” was popularized by the late Donald McCabe, whose research career of more than three decades focused on why students engage in academic misconduct and how to prevent it (McCabe, 1992; 2005; 2016). McCabe was instrumental in shifting the narrative of academic misconduct towards that of integrity, with the former having a deficit-based foundation and the latter, a strengths-based orientation. As a result, many post-secondary institutions now have programs and supports available to students to help them understand how to uphold and enact academic integrity throughout their schooling. This includes, for example, tutorials focussing on how to cite and reference properly to avoid plagiarism, how to ask for clarification for assignments, and how to avoid unethical collaboration, also known as collusion (Lock et al., 2019; Miron et al., 2019).

Several individual and contextual factors can contribute to breaches of academic integrity among students. Individual factors include, for example, a student’s maturity level and their ability to understand what is expected of them in the learning environment, with younger students and those who speak English as an additional language being more at risk than older students for whom English is a first language (Bertram Gallant et al, 2015; Bretag et al., 2014; McCabe et al., 2012). Contextual factors include parental pressure to succeed, excessive academic workload, and instructor attitudes towards integrity, with more instances of misconduct occurring in courses where educators turn a blind eye to breaches of integrity (Bertram Gallant et al, 2015; MacLeod & Eaton, 2020; McCabe et al., 2012).

A key message for students who are entering schooling for the first time, as well as those returning to school after a long break, is that academic integrity is not simply about avoiding misconduct behaviors. Academic integrity is training for ethical conduct in the workplace, as well as in life. There are strong links between academic integrity and ethical workplace behavior (Gilmore et al., 2016; Guerrero-Dib, 2020; Wideman, 2009).

Academic integrity is one element of educational ethics, and it is often viewed through the lens of student conduct. But educational ethics includes a broader discussion that expands beyond the classroom. For example, educational ethics includes consideration of the proliferation of fake and fraudulent credentials and their impact on various professions, as well as on society at large.

Counterfeit and Questionable Credentials

There are two main types of deception involved with illegitimate credentials: (a) fake and (b) faulty. Fake documents include, but are not limited to, counterfeit degrees, diplomas, and transcripts. Faulty credentials are those offered by some for-profit businesses posing as schools that actually hold classes but result in a piece of paper that carries no value because the programs are not recognized or accredited. I elaborate on each of these in the sections that follow.

Fake Degrees and Other Counterfeit Documents

In 2005, it was estimated that the fake degree industry was worth \$1 Billion USD per year (Ezell & Bear, 2005). There has been no publicly available industry valuation since that time, though there remain strong indications that the industry has continued to proliferate, particularly through the sale of degrees, transcripts, and other credentials online (Carmichael & Eaton, 2020). In

2016, an individual in the United States was charged with “wire fraud, conspiracy to commit wire fraud, and aggravated identity theft in connection with a worldwide ‘diploma mill’ scheme that collected at least approximately \$140 million from tens of thousands of consumers” (United States Department of Justice: The United States Attorney’s Office - Southern District of New York, 2016, p.1). The case pertained to one individual operating a single parent company, but there are numerous companies operating similar businesses, and the full extent of the industry is not known.

Today it is easy to buy a degree or credential online in a matter of minutes. A simple Internet search on how to buy a degree produces hundreds of millions of results. Individuals can be tempted into buying fake credentials for a number of reasons. One obvious reason is that degrees have value to employers; degrees are viewed as “the gateway to better paid jobs” (Attewell & Domina, 2011, p. 57). Obtaining a fake degree can be seen as increasing a person’s chances of getting a better job without having to spend the time, money or energy required to earn a degree honestly. In such cases, individuals place less value on the *process* of learning than they do on the end *product* (i.e., the degree or diploma). Degrees and diplomas are intended to signal the successful completion of an educational program. When individuals purchase degrees rather than earning them, they are attempting to circumvent the learning process that leads to the achievement of being awarded a parchment upon successful completion of their program.

Faulty Programs Offered by For-Profit Schools

In addition to fake degrees sold online, another area of concern is predatory for-profit schools that admit students and run programs, but the credentials they give to students are not legitimate because they have not received approval or certification from regulatory or accreditation bodies (Angulo, 2016; Ezell & Bear, 2005). The quality of educational programs is not determined by the promotional materials produced by an alleged or actual school, but rather by external accreditation bodies whose work involves regular auditing and review of programs. In the United States, educational program accreditation is often undertaken at the state level, and in Canada it is the responsibility of provincial and territorial quality assurance agencies (Angulo, 2016; Ezell & Bear, 2005). In other countries, such as Australia and the UK, national bodies are responsible for quality assurance in higher education (Quality Assurance Agency, 2020; Tertiary Education Quality and Standards Agency, 2020).

As a result, students can be duped into taking educational programs with no value if they fall prey to predatory educational providers whose primary intentions are to generate a profit, rather than to help students learn. In the United States, there have been cases of for-profit colleges engaging in large-scale student loan fraud, as they have organized marketing schemes to attract students and then allegedly help them to apply for student loans for unaccredited programs (Angulo, 2016). The result can be that students end up with tens of thousands of dollars in student loans and a piece of paper at the end that is not recognized as a legitimate credential in any profession.

One primary difference between fake and faulty degrees is the intent to deceive. When individuals buy a fake credential online, they do so knowingly. When students enroll in unaccredited programs offered by some for-profit colleges, they may do so thinking they are

going to earn a legitimate credential, only to discover later that they have been deceived by businesses operating as under the guise of being a school. In many jurisdictions, there are few rules or regulations about what is required for a business to call itself a school (Angulo, 2016; Ezell & Bear, 2005), so the notion of *caveat emptor*, or “buyer beware,” is important when prospective students are considering where to enroll.

The Consequences of Fake and Faulty Credentials

Fake and faulty credentials can result in serious consequences. For example, some engineers working at the nuclear generating station at Three Mile Island were found to have fake engineering degrees (Ezell & Bear, 2005). The accident that occurred at the station in 1979 caused radioactive gas to be released into the atmosphere after a cooling malfunction caused part of a reactor core to melt (World Nuclear Organization, 2020). Although no conclusive causation can be drawn between individuals who may have had fake engineering degrees working at the plant and the accident itself, the possibility that there may be a correlation is worth contemplating.

In addition, every year individuals are arrested for practicing in a profession without having legitimate credentials. One example is the woman in Quebec, Canada, who had been practising as a surgical nurse for twenty years before it was discovered she did not actually have a nursing degree (CBC News, 2020). Another example is the man who posed as an obstetrician-gynecologist after acquiring fraudulent credentials to obtain a medical license in Maryland, United States. He was later charged after multiple class-action lawsuits were brought against him representing more than 200 patients (Bui, 2018; McKinney, 2019).

The ultimate consequences of fake and faulty credentials can include serious and long-standing harmful impacts on human lives. Those most affected by fake and fraudulent credentials might not be individuals who acquired the illegitimate papers, but rather members of the public who trusted in them. These examples highlight a few high-profile cases, but there are many other similar ones, throughout the United States, Canada, and beyond. It is important for those working in the field of career development to understand the extent of the fake and faulty degree industry and its impact on professions, as well as on society at large.

The Role of Career Development Professionals in Promoting Integrity

Career development professionals play an important role as integrity advocates. When working with clients, it is important to educate them about the importance of selecting reputable educational programs to ensure that the training they receive is high quality. It is not simply a matter of signing up for a program to earn a credential; the legitimacy and reputation of the credential and the school also matter. If a client is going to invest in training, and particularly if they are going to take a loan to advance their education, it is crucial that the program they choose has a strong reputation and is recognized by legitimate accreditation agencies, as well as being respected by those who work in the profession.

It can be confusing for students, employers, even those who work in higher education, to disentangle what it means for a credential to be legitimate. Words such as “registered,” “incorporated,” or “licensed” can mean different things, depending on the jurisdiction (Ezell & Bear, 2005). When a school or program claims they are “licensed,” it can simply mean that they

have purchased a license to operate a business in a particular city or region, which is something quite different from a license to practice a particular profession (Ezell & Bear, 2005).

Taking the time to educate clients about the importance of identifying and then enrolling in educational programs that match with their career goals is a first step, but it is incumbent upon career development professionals to go further. Helping clients develop acumen about the credibility of the programs they might be considering is crucial in ensuring that the credential they receive at the end actually means something.

Conclusion

In today's world, an individual's personal reputation can have an impact on their career development (Joyce, 2016). Similarly, the reputation of the institutions and organizations offering credentials also matters. Career development professionals can serve as advocates of integrity in a variety of ways.

Firstly, they can make clients aware that if they need to develop particular skills for academic success, such as citing and referencing, most reputable schools will offer programs through their student affairs offices at no additional cost to students. These come in the form of academic integrity tutorials, workshops, and writing supports designed to help students succeed in their academic programs (Lock et al., 2019; Miron et al., 2019). Career development professionals might consider expanding their professional networks to include learning specialists and academic advisors at reputable educational institutions to better understand how to help clients who might benefit from learning support.

Secondly, it is important for career development professionals to understand that the fake and faulty degree industry is massive and global. In particular, many predatory businesses operate under the guise of being a school, when their focus is squarely on generating profit, rather than helping students learn. Savvy career development professionals will steer clients away from such programs and instead redirect them to reputable institutions.

Finally, career development specialists can educate their clients in how to make informed decisions about training and education programs that will help them achieve their goals. By doing so, career development professionals will not only help their clients, but they will also further develop their own reputation as ethical professionals themselves. Everybody wins.

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Her latest book, *Plagiarism in Higher Education: Tackling Tough Topics in Academic Integrity*, published by ABC Clio / Libraries Unlimited, is scheduled for release in June 2021.

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CHAPTER 4:

WHAT WE LEARNED FROM THE GIG ECONOMY

By Kelley Steven-Waiss and Edie L. Goldberg

In today's competitive landscape, companies need to develop fresh approaches to managing talent by leveraging new technologies and responding to changing business models that redefine employment relationships. When new methods of competing for talent on demand gave rise to platforms such as Topcoder and Upwork, the idea of a workforce made up of both employees and temporary talent began to make a lot of sense. These talent platforms provided a new way for companies to increase their speed, flex their capacity, and reduce costs associated with hiring full-time talent for short-term or intermediate needs.

However, the digital transformation so many companies are experiencing today is resulting in the need to deploy new skills that are often in higher demand than supply. This remains true no matter how an organization plans to source talent. We must challenge what we thought was novel in talent management as recently as two or three years ago. Now it is a race to acquire skills. Talent operating models need to evolve to be more efficient in their use of human capital and more responsive to the rapid shifts in skills, technology, and business models.

Organizations cannot afford to leave any talent asset untapped. However, it is often overlooked that before taking up their current positions, people had other roles, industry experiences, skills, and interests. Most human capital management systems categorize employees by job titles, not skills, though many systems link static job descriptions with requisite skills for those job titles. Even this simple organizing system is flawed, because quite often employees customize their job titles for niches they are in, making common jobs difficult to compare from a systems perspective. For example, a sales manager becomes a "fine wines sales manager," and a software developer becomes a "hacker" or "QuickBooks guru."

People Are More Than Their Job Titles

This difficulty aside, most employees are much more than their job titles. They bring past experiences and current passions (both personal and professional) that reflect different skills and abilities they can contribute to their organizations, even if those skills aren't applicable in their current role. For instance, to determine how many web designers a company might have, you would have to get beyond those individuals with "web designer" in their job titles. Some people are self-taught web designers and design websites as a hobby or for personal projects. To answer this question, you would need to survey the skills of these employees to know what talents they possess, regardless of the positions they have today.

If employees are more than their job titles, how do you improve the visibility of your company's talent, and what can you do with this increased visibility? What can you learn from the gig economy, and how can you apply some of that knowledge to your company? Most gig workers find their work on talent platforms (such as Upwork, Toptal, Guru, and Fiverr), where those looking to hire an individual search a database of people who have specific skills for certain projects. The gig workers on the platform enter their skills and interests into the database. The

talent platform then matches gig workers with opportunity providers. By mirroring such a system internally, organizations can gain greater visibility into their own talent.

Goal: Better Leveraging of the Talent You Already Have.

In today's constantly changing business environment, organizations need to gain an in-depth understanding of the talent they have to leverage all the skills inside their companies and to create strategies to transition employees to new kinds of work. Let us start with the first goal: better leveraging of the talent you already have. We need new technology and processes to enable organizations to gain insight into the skills their employees have. This would provide greater insight into the complete set of capabilities within the organization beyond the bounds of job titles or résumés. Furthermore, this technology must be dynamic to add new skills as employees grow and develop. Today, we would argue that LinkedIn profiles may be a more up-to-date profile of an employee than a company's internal database. This is because individuals are encouraged to update their profiles as they gain new skills. By knowing the skills resident within the company, organizations can better utilize those skills when and where they need them.

Now let us address the need for strategies to transition employees to new kinds of work. Every day we are inundated with articles addressing the shifting business landscape and the quandary many organizations face of what to do with their current workforces when, because of technological advancements in the workplace, existing skills become obsolete and new skills are needed. When a company is undergoing significant strategic shifts, it is particularly important to gain greater insight into all the skills in the company. There is simply not enough talent in the labor market for some of the in-demand skills today (e.g., data analytics, machine learning, and/or artificial intelligence) to meet the growing needs of companies. Companies need to identify what skills the existing talent has, and who has foundational skills that can be built on to develop the skills needed for the future of work.

We Need to Gain Visibility into the Hidden Skills, Capabilities and Aspirations of Employees

Given talent shortages, firms need to figure out how to build their own talent. Reskilling the company's employees for the future of work is one example of the Business Roundtable's redefinition of the purpose of a corporation, which now includes serving customers, employees, suppliers, and communities in addition to shareholders. Investing in employees and the communities a business serves is critical to its long-term success. When skills become visible, any organization can then manage both its supply and demand for such talent through requests on projects or open requisitions. Armed with this information, an organization can create talent strategies to close the supply-demand gap and prepare for future strategic shifts.

By gaining visibility into the hidden skills, capabilities, and aspirations of their employees, organizations can more rapidly and cost-effectively match the right talent to solve real-time business challenges. They can also tap into discretionary effort from a highly engaged workforce by allowing employees to work on those projects that best match their skills and interests. The future is about connecting people with opportunities for micro-learning and personal growth and

fully leveraging all their capabilities so that they can lead more fulfilling careers and companies can maximize their investment in talent.

Employees today want new and different experiences. Yet most jobs are so specialized that people get stuck doing the same work repeatedly, which leads to boredom and disengagement. Opportunities to work with different colleagues on different projects are exactly the type of dynamic learning experiences today's employees seek. When employees are exposed to new leaders, work with new team members, or can use their skills in a different context, there are constant opportunities for learning and growth. Not only are new challenges presented in those work teams, but employees also learn from different leadership styles and from their coworkers' knowledge, skills, and experiences.

Given that today's millennials demonstrate impatience with the speed of learning in a traditional job trajectory, we need to develop new approaches to provide continuous learning opportunities. With recently developed technological capabilities, there are new ways to provide diversity and choice in work rather than rely on traditional training or job rotation programs. Providing employees with a diverse set of experiences in which they can craft their own paths will likely attract the best talent. There is pressure to create an employee experience like that of a free agent inside an organization because the barriers to free-agent or contingent work are low and because people are demanding more diverse work, greater choice, and the opportunity to rapidly acquire new skills.

The Driver of Performance and Productivity

By participating in short-term, part-time projects, employees get to learn while doing real and important work for their organizations. We are strong promoters of the idea that at least 70 per cent of learning should come from on-the-job experiences. We just use the term "job" a little bit more loosely. When employees can opt-in to projects where they can learn a new skill set, use a



currently underutilized skill, or simply work in an area they're passionate about, they'll exert more discretionary effort. We strongly believe that companies can increase their performance and results by creating an internal gig network which will boost both productivity and engagement in their organizations. Rather than acquire new skills by hiring from outside, the new and quite disruptive reality is that competitive advantage is now based on the ability to rapidly develop and more effectively deploy the talent supply within a company.

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CHAPTER 5: WHY THE CHIEF HUMAN RESOURCES OFFICER SHOULD OPERATE AS THE CHIEF OPERATIONS OFFICER OF THE TALENT SUPPLY CHAIN

By Kelley Steven-Waiss

Imagine your CEO comes to you with a question: “How much data-science capability do we currently have in the company?”

Your human capital management system can tell you how many employees you have with the title of data scientist, but that is not what your CEO is asking. The request boils down to this: “We currently have extra demand for data-science skills, and I need to know what our current talent supply is to meet those demands.”

It is a reasonable request, and the talent analysis process is similar to the management of a manufacturing supply chain. Most human resources (HR) practitioners do not go into the field thinking they will need to understand supply chain management. However, to effectively manage their internal talent resources, they need to act as the chief operating officer of their company’s talent supply chain.

Understanding the Talent Supply Chain

When we think of talent as the asset in a supply chain, it is imperative that HR moves into a role that manages an inventory level of skills within the company. Companies of the future will require someone whose responsibility it is to ensure that supply for certain skill sets does not dip below the company’s demand for employees with those skills.

Human resources leaders will need to effectively manage the ebb and flow of critical skills before those skills become irrelevant or urgent. This will require visibility into their workforce to manage skill supply, to set strategies for reskilling or upskilling, to move employees around to fit changing business needs, and to close talent and skill gaps in the process.

Without understanding which skill sets to keep “in stock” and how to match their demand, strategy is not optimized; revenue suffers, and competitive advantage falls behind. Human resources is left to question, “Do we actually know who’s in our organization or how best to leverage our resources?”

Lessons from the Gig Economy

The rise of the gig economy indicates a trend: with organizations moving from outside the traditional workplace to the inside, with its contract workforce as a model of skill supply and demand.

Consider how the gig economy model appears in the standard, modern-day company. Employees are hired to complete designated tasks and are expected to stay within their lanes. Even if a new project would benefit from the skills of a particular employee, the employee is not tapped to contribute if it does not fit within their job description. The best employee for the project is not necessarily the one who ends up working on it, which is a missed opportunity.

And this is not necessarily a conscious decision. Company leadership generally is not aware of the range of skills that exists within its walls or who possesses those skills. Human capital management infrastructure tends to emphasize jobs but does not easily illustrate an inventory of skills.

But without it, companies must manage projects with unnecessary restrictions and incomplete information. Knowing the skill sets required to perform work and what talent capabilities exist in the company allows you to tap the right person with the right skills at the right time.

Embracing Talent Optimization

A company's problems cannot be solved by employees working in silos. Talent optimization is something HR leaders must prioritize, especially with limited talent pools and the reality that the skill sets of tomorrow will look different from those of today.

Low unemployment rates and a shrinking skill "shelf life" require HR leaders to have a finger on the pulse of not just the people they employ, but also the skills they bring—and take—with them. These market conditions make it more difficult, but also more important, to keep the right talent and skills in supply consistently. Additionally, some skills might be worth more than others during certain periods of time, and they might change quickly with business disruption.

At any point, your company may be operating without the appropriate supply of a certain skill set. However, if the business needs to pivot and you need a new skill set that is in high demand but impacted by low supply, you will have to determine a creative solution to manage your workforce. That might look like optimizing talent from the inside—such as by reskilling or upskilling—or it could mean outsourcing. Whenever possible, it is optimal to embrace a flexible workforce and create opportunities for employees to move around, gain new experience, and apply their skills.

Giving employees assignments outside their day-to-day job benefits both the company and its employees. The company has a more productive workforce, and employees can spread their wings and learn by contributing to projects they would not normally be exposed to. Employment is increasingly dependent on skills rather than degrees, certifications, or jobs. Thus, skills are becoming the new currency we must manage.

What This Means for Human Resources Leaders

By not optimizing existing talent, companies risk their own demise because they will not have the skills to be able to compete. The collective downfall of the economy is even at risk due to swaths of employees falling behind in relevant, critical skills.

Adaptive companies and their people will prosper by identifying future opportunities and proactively reconfiguring themselves and their business models in response to shifting market demands. This will require significant investments in transforming technology, culture, structures, and processes—employing tech advancements such as machine learning and artificial intelligence to match employee skills with project-based work.

Human resources leaders must start viewing their talent assets much like their capital assets and operate more as the chief operating officers of their talent supply chain. Your supply of critical skills is a source of competitive advantage, and talent assets require oversight, just like any other risk. At the end of the day, human capital is inextricably linked with the successful execution of business strategy, and only if we match our skills supply to our demand can we achieve outstanding organizational performance.

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CHAPTER 6: FINDING YOUR PLACE IN THE WORK OF THE FUTURE

By Morag Barrett, Linda Sharkey, and Louis Carter

The complex and compound assaults leveled against organizations in 2020 are still being felt in many organizations. Because issues like COVID-19 exceeded our experience, we struggled to define and describe the present and future of work. Any belief that this turning point is no more than a Future of Work 2.0 is naïve, risky, and regressive.

The pandemic has left us with a legacy of new ways of working. Highly placed officers of major corporations were looking for new metaphors, frameworks, and strategies to turn pain points into pivot points. The events of 2020 undercut any linear logic in planning and designing work that worked for people, organizations, and their communities. These events tell us the future of work requires paradigm shifts in corporate culture, co-collaborative teamwork, and career potential.

The economic and social shock presented by the Covid-19 pandemic is likely to reshape perceptions of individuals and organizations about work and occupations and result in both micro and macro shifts in the world of work (Kramer & Kramer, 2020).

Realizing a Culture of Connectedness

Culture lies at the point where worker values intersect with corporate values. The culture shifts one way or the other if the leadership fails to drive and sustain its declared core values. Culture is a social concept embodied in the behavior of its members, a function of people—not place.

It follows, then, that a values-driven culture should follow its members wherever they are. Major global corporations have been able to extend their value systems across hundreds of locations. They have been able to reach global customers through salespeople energized by their corporate culture. Culture has long been documented as a factor in determining the success or failure of an organization.

However, the redistribution of labor and jobs following the 2020 disruptions altered that balance. Instead of one corporate office, or perhaps several locations where employees came together to see, experience, and reinforce the organizational culture, companies were now working across hundreds and thousands of corporate offices located in bedrooms and home offices and at kitchen tables, spread across geographies and time zones. This decentralized workforce found itself removed and isolated. This put increased pressure on leaders to maintain and reinforce the corporate culture to keep it vibrant during this new model of isolation:

- The Centers for Disease Control and Prevention (2020) found 33% of household respondents reported signs of anxiety as of October 21, 2020. Statista (2020) reported 28.3% of workers had “difficulty concentrating,” 20% were “taking longer to complete a task,” and 14.7% were having “difficulty thinking, reasoning, or deciding.”

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- Based on inputs secured before 2020, employers had planned to invest 80% in employee mental health, 73% in stress management, 66% in mindfulness and meditation, and 54% in financial wellness. However, COVID-19 was only one of the influencers affecting that commitment amidst 2020's volatility (Wellable, 2020).
 - 34% of one million Americans contacted by the U.S. Census Bureau admitted signs of anxiety and/or depression during the early months of 2020, paralleling sharp increases in COVID-19 cases and deaths (Flowers & Wan, 2020).
 - The pandemic effectively separated good jobs from bad jobs. The good jobs were those that transitioned to alternative work rather seamlessly. The bad jobs were those that disappeared as their brick-and-mortar locations were boarded up. As we discovered, this shift could "result in an increased gender, racial, and ethnic inequality" (Kramer & Kramer, 2020).

The labor culture that emerged from the pandemic's influence was complex:

- Organization leaders would need to study their success in managing remote work where it had long been the norm, as in medical billing and airline reservations. Then they needed to extend those behaviors to newly remote workers.
- Leaders needed to respect the compensation structure affecting distance work; juggling pay rates across distance economies, labor markets, and cost of living centers, challenging leaders to try to meet compliance standards, remain competitive, and respect employee needs.
- Where distant work was new to employees, keeping employees informed and engaged with corporate values fell to management. Employees may have needed focused and consistent attention by managers who continuously reiterated the organization's value vocabulary.
- Leadership needed to develop a strategy for outreach and empathy. Non-traditional workers needed to feel like part of the ecosystem. They needed a sense of where they belonged in the business plan and in its future.
- All employees needed a culture of care and a sense of psychological safety, even at a distance. If employee concerns appeared as disinterest, disengaged, or absent, leaders needed to offer wellness options consistent with employee values to respect workers and their work.

We completed a study session with the Best Practice Institute (BPI) on the state of trust and performance of the new workforce and the future of human resources. We collected first-hand accounts of more than 30 chief human resources officers and chief technical officers in an online session on their levels of trust, perceived performance, and suggestions for performance management and human resources, now and in the future. Organizations attending the study session were from a wide range of industries, payroll sizes, and revenues. Industries ranged from financial services, banking, and insurance to manufacturing, healthcare, pharmaceuticals, and chemicals, with payroll sizes from 10,000 to 200,000 and more, and revenues from \$1 billion to over \$200 billion.

We started with trust. They all affirmed that they trusted their workforce. However, they were all concerned that negative behaviors seemed to be increasing. They are looking for ways to assess performance in different assignments, assessments that would satisfy their CEOs' desire to manage by results. In fact, about 15% of organizations indicated that employees were not showing up for meetings, and were, as one organization said, "in hiding" during the lockdown.

Ten percent of organizations are developing ambassadors or buddies to assist new hires and newly re-assigned workers. These coaches have demonstrated behaviors that are consistent with corporate values and culture. They are the organization's historians and storytellers, workers loyal to the business's vision and mission and adept at cross-functional thinking.

Assigning a buddy is only one tactic. The group agreed that the organization needed to develop a training strategy to identify, educate, deploy, and monitor the performance of non-traditional workers. That strategy had to connect culture in multiple ways to diverse working relationships. That activity energized and extended the values, but it remained a big challenge.

Sustaining Teamwork Among Remote Workers

Organizations have routinely displayed a poster of an eight-seat crew rowing in admirable synchrony to suggest the value of teamwork in achieving goals. However, today's challenges ask those same organizations how they will finish the race when all the rowers have been sent home and are now sitting in different boats.

Dispersing the workforce disrupts teams. Teams are tied to place even though they should not be in theory. Teams have been a function of proximity. Members have been accustomed to easy contact with other members and team leaders. Effective teams depend on mutual and reciprocal connectedness. They look to body language and facial expressions to assess and strengthen their relationships. So, distant work challenges coordination and collaboration.

Zoom and emerging technologies have been essential in allowing people to meet, learn, and act virtually. They can show their work, discuss strategies and tactics, and work through processes together. However, these technologies lack the spontaneity of real-life connections—those opportunities for shared intuition and comfortable camaraderie: the "water-cooler" conversations that may spark cross-functional collaboration and creativity.

There will be new meeting platforms, and managers will try to resolve these weaknesses. However, a majority of executives in our BPI research session indicated that managers must address these issues immediately. People are deeply frustrated by endless virtual meetings. Invariably, one party or more involved in virtual meetings had not mastered the technology. Participants talked over each other, and distractions were routine.

For our book, *The Future-Proof Workplace* (Sharkey & Barrett, 2017), we conducted research and surveyed leaders around the world to test the preparedness of companies for the future of work in six key areas (purpose, relationships, culture, technology, leadership, and diversity and inclusion.) The results of more than 500 responses indicated that the adaptation of new technology to do work was spotty at best, and that both the experience of effective leadership

and strong organizational culture were inconsistent—even when the parties were in the same office.

The onslaught of remote work and workers being forced to use the new technology (when they could acquire it, and when the world-wide supply of webcams, for example, rushed to catch up) only exacerbated the confusion and fear of adapting to new modes of work, and made strong leadership and culture even more critical for long-term success, both at an organizational and individual career level.

Best practices in managing dispersed teams were still only coming together as leaders sensed the frustration, anxiety, and reduced productivity of newly reassigned workers—people used to mutual exchanges in person. Employees shared that they missed the casual conversation, ideas shared in the hallway, and plans discussed over coffee. Senior executives in the BPI research session suggested these practices to ameliorate dispersed team challenges using the following next practices:

- Soliciting inputs from remote workers to develop a strategy for communication. That strategy must include instruction on mastering meeting technology.
- Assign a team facilitator distinct from the team leader. The facilitator sets up meeting technology, distributes support materials, and keeps records. This goes far beyond the traditional secretarial responsibilities, with the role performing technical producer responsibilities for the meeting.
- Schedule Spontaneity. In a time when back-to-back scheduled Zoom meetings were the order of the day, employees craved spontaneity. Forward thinking leaders were scheduling for spontaneity. For example, having a permanently open Zoom room for people to pop into and hang out, happy hours, and “working meetings” where the only focus is “listening to your colleague work,” all go to recreate the sense of being in the office and nurture the sense of team.
- Discuss how values are playing out in this new environment and what values may need attention and are hard to embody in the remote environment. The time is now to recalibrate and make the implicit explicit when it comes to the roles of engagement at work. What does “business professional” look like on a Zoom meeting when not everyone has access to a private office, green screen, or technology? How do service-level agreements and response times need to be adjusted to reflect the new workplace? These, and many more implicit rules of engagement, need to be revisited if everyone is to feel connected and set up for success in the new world of work.
- Have senior executives “drop in” on meetings with no agenda other than to listen and solicit feedback. These “open mic” meetings offer raw dialogue with employees at work.
- Establish meeting practices that maintain order but also work to ensure values such as respect and empathy.
- Ensure collegiality and inclusion with procedures for reporting negative behaviors.
- Acknowledge and celebrate team successes and achievements in real time across functional silos.

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- Schedule debriefing sessions to parse and reflect on team achievements and learnings from failures and missed opportunities.
 - Introduce team meetings with a reminder of how their work serves the organization and customer experiences.
 - Work to improve and sustain leader and member engagement.

Team members may have assignments other than their team functions, and many workers may not be assigned to teams. They still need to feel a connectedness to the company's purpose, the customer, and other workers.

When employees are removed from the physical environment—the windows, furniture, and cubicle walls—that defined their role for so long, it will be interesting to see if they sustain the connection to the corporate brand and team they once enjoyed. Managers would be smart to build a routine connection—by phone, email, text, virtual meeting, and/or social media—with all workers under their supervision. Essentially, we are recommending that we talk with employees not just when we need something, but to check in on how they are doing, not just what they are doing. These messages, regardless of their specific content, reaffirm and model desired values, that they are cared for, that they are connected to the team, that they belong.

2020 introduced seismic events defined by its divisiveness, a leadership crucible for all. Organization leaders who were inclined to simply cope and manage needed to step up to change their ways, master new technologies, and champion a culture of collaboration and emotional connectedness. The need to focus on the individual people within the organization became more critical than ever.

Careers and The Future of Work

Jobs have always been designed as system functions. Each person functions to deliver something to another function. So, proximity has played a major role. Keeping people near their work and within reach of other functions influenced facility design, systems interaction, and workflow.

Calendars, projects, resource accessibility, and more have governed the formation of jobs. Participants in the BPI research session often defined workers as functionaries—hands and feet mobilized, monitored, and managed to reach targets.

Over 75% of BPI session participants indicated that they would continue to leverage some form of technology, artificial intelligence, machine learning, and more to replace or assist these functions. The dispersal of work is driving some of this evolving technology. According to the World Economic Forum (2020), “Automation, in tandem with the COVID-19 recession, is creating a ‘double-disruption’ scenario for workers.”

These organizations would cope with new threats using tweaks and Agile scrums. This would be adaptive thinking, using recovery strategies to restore process equanimity and balance.

All agreed that employers needed to change the expectations of work tasks. Employees needed new parameters if they were to work remotely for the short- or long-term. For instance, freelancers understood they worked by contract with no obligation other than delivering products or services to the client's specifications. However, full-time employees who were made or permitted to work off-site, needed employers to explain, strengthen, and engage them in continuing work.

Once the functions had been dispersed and distributed to at-home work, gig workers, and digital nomads, leaders needed to assist workers in a transition likely to last longer than expected. Employers were just awaking to this responsibility.

It is too early and the data too sparse to identify patterns emerging in the success of decentralized work. In an economy so dominated by hospitality services, leaders struggle to see central themes and patterns. However, all the highly placed officers surveyed recently said they represented organizations that had shifted most of their work to remote or hybrid models. A June survey by the accounting and consulting firm PwC (2020) found that 72% of workers would like to work from home at least 2 days a week. This has huge implications for the future of how and where work is done (Weed, 2020). A recent Gallup survey (Gallup, 2020) also reinforced these fluctuating patterns. According to their study, 33% of Americans say they still always work remotely, down from 51% in April; 25% sometimes work remotely; and 46% of workers state that all or almost all the employees in their workplaces are back on-site. These distributed models emerging have economic implications as companies are seeing the ability to decrease real estate needs, in particular in high-rent areas. Hybrid models could be more costly.

This is a double-edged sword. Research has shown, "the empirical evidence overwhelmingly points to recessions [such as that triggered by COVID-19 and other 2020 socio-economic issues] as important periods of accelerating automation and therefore of increasing productivity. Not only do we observe a relative increase in investments focused on automation, but we also observe job upskilling and a permanent decline in routine jobs" (Blit, 2020). In short, non-traditional work tends to continue despite external conditions.

Employers who have turned traditional work over to non-traditional workers should not claim confidence in their "achievement." If the transition has been smooth, it does not mean it has been successful. For instance, an increasing number of ranking human resources and talent management executives are concerned about employee wellness and future mental health challenges.

These executives saw an increase in absenteeism from the tasks assigned and from meetings framed. They attributed this to employees seeking other employment or who were frustrated and disengaged from the work. Added to the frustration and isolation created by the lockdown, employees were showing symptoms typical of national findings, and employers were promoting and extending their employee assistance programs and wellness/mindfulness support.

Nonetheless, organizations in our BPI study continued to explore alternative approaches to recruiting outreach, readiness assessment, and onboarding and sustaining development:

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- Many careers in technology were easily performed at remote locations. People were making careers of gig work and freelance support in coding, programming, website design, and more.
 - Alternative employment is attractive to underserved and under-represented talent. One organization reported recruiting the spouses of military people; these recruits could work from locations wherever their spouses were assigned.
 - Other organizations reported success in recruiting high potential talent who did not want to relocate.
 - Employers must develop recruiting tactics for virtual interviews, and job candidates must improve their virtual interview skills. Moreover, employers must explore additional modes of candidate assessment, as well as assessments aimed at discerning those talents best suited for non-traditional work models.
 - Senior executives must accept that talent acquisition practices are changing. They must understand that people can work remotely and still be effective. They must accept that productivity attaches to the person and not the place.
 - Some positions should be reconfigured essentially. External salespeople, for example, are energized by their travel and in-person client interaction. Managers reported that these extroverts were having difficulty adapting to being taken out of the field.
 - Hospitality service workers, too, excelled at customer relationships, only to see their jobs and employers disappear. However, their customer-service skills found options in curbside delivery, home delivery, and organizations prepared to redirect their proven skills to remote work.
 - Organizations have initiated sustaining processes that link recruiting with onboarding that ensures quick acclimation. They are using acquisition teams to make this a seamless experience. Many organizations have been recruiting at even a global distance, so they are adapting those tactics to recruiting and placement throughout their operations.
 - Job seekers should continue to follow their own best practices in job applications, reporting on time, appearing in professional attire, smiling, and answering questions clearly. They can expect virtual interviews to replace personal videos at some point in the process.

The pandemic created a job-seekers' market. Headhunters were reviewing their talent pools for candidates willing to work remotely. Organizations still recognized a talent shortage, but they could now access candidates for whom proximity was not an issue.

Back to the Future

It is too early to call the long-term impact of 2020 and the work-from-home requirements. While some organizations are reportedly returning to the office or planning to do so, a rush to return to established norms is premature.

We are still seeing reports of virus mutations which may again result in more stringent restrictions and a step back to work-from-home. We are entering an uncertain future where the global impact on both local and personal lives will continue, impacting how we live, how work, and how we play.

Here Are the Current Practice Pivot Points

Regardless of the chosen vocabulary, job applicant, employee, and employer should pursue and model the five pivot points explored throughout *In Great Company* (Carter, 2019):

1. Systemic collaboration uses small teams to co-create results, using open communication channels, where information and advice for being better in the future are shared freely, frequently, and effectively.
2. Positive future thinking offers model optimistic behaviors uniting workers across distance and across functions in a unified way to move forward together in achieving results.
3. Alignment of values in word and action drive granular actions toward commitment and allegiance to higher values that brand the organization and its purpose.
4. Respect is an emotional act when offered and when received. In best practice, it becomes the organization's social currency, its medium of emotional exchange.
5. Killer achievement attracts candidates and connects workers. Every stakeholder has an interest in achievements of benefit to the individual and organization. Emotional connectedness is markedly deepened when people have objectives that are simply stated and where employers have removed minutiae and competing interests.

Employees should rethink how they advance their careers in this new distributed model. Many employers extended their stay-at-home work dates to end of 2021. So, how do you keep from having your career stuck when you are working in a spare bedroom or at the kitchen table? A recent study by the *New York Times* (Weed, 2020) highlighted some key actions employees could take to stay relevant, visible, and career-advancement worthy:

- Now more than ever ask for feedback. Check in with your boss and your team to ensure you are on top of your to-do list and working on the priorities. Don't be afraid to ask for how you could do things better and embrace the feedback. Use this as an opportunity to improve.
- Communication skills remain critical. Do not assume you understand what is expected of you or what you expect of others. Learning how to ask for understanding, checking to see how people are doing, and showing empathy are essential skills both for your own development for nurturing trusting relationships with colleagues. Show flexibility and understanding.
- Volunteer for work outside your normal routine. This will help you build experience and get exposure. "Offer to mentor new employees, create remote social opportunities, or pitch in to help a team rushing to meet a deadline."

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- “Define your intention . . . Perhaps you are aiming for different responsibilities, a promotion or a move to another division. ‘Find small opportunities to gain experience in the area you want to move to . . . Stretch yourself—say yes, even if it makes you uncomfortable” advises career coach C.J. Liu Rosenblatt.
 - Nurture your professional relationships. As shared in *Cultivate* (Barrett 2014), you cannot be successful in business or life unless you are successful in nurturing your professional relationships. At a time when people have been feeling disconnected, be proactive in connecting with those who work with, for, and around you. Schedule time weekly to nurture your network through phone calls, email, messaging, and social media.

This is not a time to retreat into yourself. Use this as an opportunity to grow and gain exposure. If you have discretionary time because you are not commuting, for example, use it to learn new skills, and do not be shy to offer them.

One thing is clear. Previously, we wrapped our lives around our work. While things may seem bleak, employees are reporting that they can now wrap their work around their lives. They have more flexibility working from home and many love it.

With these frameworks in place, organizations can define their new direction using non-traditional work to enhance their futures. They will reinvent work, integrate distant workers, launch continuous improvement initiatives, leverage technology to shape new normative behaviors, and reward effective commitment to customer experience.

If organizations are to get back to getting better in a world where they are to effectively motivate and manage hundreds to thousands of decentralized work centers, they must reimagine their futures, reconstruct their systems and processes, and re-energize their values.

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CHAPTER 7: SOCIAL MEDIA: BUILDING COMMUNITY AND COLLABORATION

By Nancy Richmond

Social media has grown rapidly in recent years and has drastically changed the way we connect, collaborate, and build communities for professional use. Social media usage is one of the most popular online activities. In 2020, over 3.6 billion people were using social media worldwide, a number projected to increase to almost 4.41 billion in 2025 (Clement, 2020). In the future, we will likely see social media usage continue to grow, with the increased ability to make collaboration an improved experience for all stakeholders. LinkedIn is often the social media network that comes to mind for developing a professional network and creating collaboration and business opportunities. However, all social media channels, whether it is Facebook, Twitter, or Instagram, provide an opportunity to make connections and build meaningful communities. Social media has changed the ways in which employers, workers, job seekers, and recruiters have the opportunity to interact with one another (Bridgstock, 2019). In fact, 80% of employers now use social media as a recruiting tool (NACE, 2017). People around the world meet online to chat, to find like-minded people, to debate issues, to share information, and to ask or answer questions (Boyd & Ellison, 2007). Social media has become a place where a group of individuals can share interests and experiences while developing strong feelings of belonging and forging a sense of shared identity through repeated online participation and interaction (Preece & Maloney-Krichmar, 2003; Richmond, 2014).

Human beings are deeply social creatures who need community and collaboration to thrive and grow professionally. Stuck at home during the COVID-19 pandemic, with events canceled and public spaces closed, people worldwide spent more of their lives online than ever. The ability to communicate in real time is what brings people together. In our digital world, it is common to see people staring into the screens of their smartphones, watching videos, texting, and talking to their online connections. Human behavior is changing in front of our eyes, and the uncertainty of what this means for our future can feel overwhelming and concerning for some.

There has been a great deal of emphasis in the media in recent times on the negative impact of social media on society, such as addiction, cyber-bullying, and privacy concerns. Yet social media is far from all bad. The first and foremost benefit of social media is connectivity. People from anywhere can connect with anyone. Social media allows individuals to create a sense of belonging, self-expression, or curiosity, or a desire to interact with others. Researchers are discovering that social media can be beneficial for feeling more connected to the world around you. For example, having a strong online social network can be associated with positive mental health and well-being (Bekalu et al., 2019). Social media can serve as a valuable tool for professionals to network, market their skills, and seek business opportunities.

As the world adapts and changes with the use of social media, there is tremendous opportunity to harness the power of social media for the purpose of professional development. Social media allow us to communicate with our friends, colleagues, and thought leaders to gain knowledge of new things, develop interests, and be entertained (Siddiqui & Singh, 2016). We can make use of

social media to expand or broaden our knowledge in a particular field and build our professional network. Social media provides us with an opportunity to have a conversation with our audience, gain feedback, and build brand awareness.

As practitioners, we play an important role in understanding how to create social media strategies that are both useful and productive. Successful integration of social media in professional development depends not only on the skills available but also on the willingness to consider the benefits and possibilities that social media can bring to the workplace (Kettunen et al., 2015). Five social media strategies for professionals that can help foster collaboration and community building are presented below.

Developing Authentic Relationships

We know that social capital (Seibert et al., 2001) is important for your career and that better-connected people do better in life. Social media provides individuals with a platform to have authentic interactions with others while overcoming the barriers of distance and time. The first step to building meaningful relationships online is following and engaging with the right people in the first place. If you follow anyone, you are choosing from a wide range of people with different interests, personalities, values, and more. Being a strategic social media user means seeking out the right connections, showing up consistently in the newsfeed, commenting on social media posts, talking about shared interests, and supporting each other.

Having a LinkedIn profile is important; however, being an active social media user means not just having a profile but consistently posting and engaging with others online. Building connections on social media, whether it is LinkedIn, Twitter, Facebook, or Instagram, is an opportunity to keep the dialogue going online. Using social media as part of everyday routine and responding to content that others share helps individuals feel more connected and trusted.

Social media users have the chance to continue to connect and network online with their friends, colleagues, classmates, co-workers, thought leaders, and professionals throughout their lifespan. Whether they are getting married, traveling, having a birthday, being promoted, starting a new job, having a baby, or taking up a new hobby, it is the social part of social media that helps build connections and makes reconnecting possible. It is not only positive news that connects us but also the failures and hardships in life. Shared interests, compassion, and experiences not only benefit us to stay more connected but also help build trust. Your career and circumstances may change directions, but your online community can remain throughout a lifespan.

Virtual reality (VR) and augmented reality (AR) are examples of a new way social media users will likely communicate more authentically with one another in the future. Facebook is currently working to make VR and AR part of our everyday online experiences. Augmented reality is already becoming more common in social media with the increased use of lenses, filters, and effects on Facebook, Instagram, Snapchat, and TikTok. Social media platforms offer AR filters that users can apply to transform their faces into animals or add elements like flower crowns or glasses to their images. However, face filters are not just for fun and games; they offer a new way to communicate. Organizations are using branded content and filters to better connect with their followers to create fun and more authentic experiences. Virtual reality still has some

obstacles to overcome; however, do not rule it out. Facebook has invested a great deal in Oculus VR, the maker of a promising headset that has revived hopes around a virtual future for social media. Facebook believes that VR is the best way to create authentic relationships online, and no doubt this will greatly change the way social media users connect and collaborate with one another in the future.

Creating Engaging Content

Engaging content is critical for any social media strategy. Professionals need to make sure their profiles are up to date with a clear bio that explains who they are, along with a recent, recognizable, headshot. Social media users can make their content more discoverable by finding out where their audience typically hangs out and joining conversations in the same online space. Building and keeping a community on social media requires consistent and continuous effort. It is essential to post content regularly, answer questions, leave comments, and ask followers to engage (Gorbatov et al., 2018). Users need to know their audience and figure out what information their followers need the most. No one wants to follow boring and uninteresting accounts. Engagement on social media improves by providing thought-provoking content, posting content at preferred viewing times, and understanding your audience's needs.

Keep in mind that followers are real people with real emotions. Professionals should tell a story and help their audience feel more connected through their authentic words, visuals, and video. Video is the most engaging content type across all social media platforms. Do not be afraid to create video for your social media strategy because a high-priced video budget is no longer necessary. Anyone today can create a video on their phone that engages, educates, and intrigues their audience.

Creating content and writing responses will continue to evolve and become easier in the future with the help of artificial intelligence (AI). Data tell us that better designed visuals and videos have a higher impact on social media. For example, one change that we have already seen is graphic design tools such as Canva that make it easier to create images, gifs, and videos for social media content. Drag-and-drop features of Canva and similar services are great for their ability to automate good design. In the upcoming years, we will likely see more tools like Canva that can help make our work easier and smarter through the automation processes. For some tasks, such as content creation, automation has the potential to reduce repetitive and clearly defined work to better connect with our audience. Eventually AI will be able to help you write the content for your posts based on your follower's interests and your desired outcome. Professionals will continue to use AI to dramatically speed up and streamline their social media strategies. The easier it becomes to create appealing content with technology, the better we will be able to connect with our followers in the future.

Do not be afraid to be creative and take risks. Professionals can track the success of their social media posts through the number of likes and comments they receive. If a post is not getting engagement, try something different next time. An audience will let you know if they find your content interesting through their engagement levels. The key to success on social media is to not give up and to consistently post each week. Developing and using a content calendar can help professionals stay on task and ensures that social media is continuously published even when life

becomes busy. Social media users can shape what others think about them through developing a strategic social media content strategy. Creating engaging content allows professionals to connect with existing and new audiences in deeper ways while bringing attention to their work and interests.

Big data and social media analytics have created the opportunity for professionals to find useful patterns and conclusions without a team of data scientists at their disposal. Facebook, Instagram, YouTube, and Twitter offer free analytics tools you can use to understand your audience and their reactions to your social media posts. LinkedIn offers basic, free data on your company page, and full analytics software with a premium account. Hootsuite, Sprout Social, Hubspot, Iconosquare, Socialbakers, Brandwatch, and Quintly are a few of the many paid-for social listening, scheduling, and analytical tools available to enhance your social media strategy. As the number of people, communicating online continues to rise, so does the data that they produce. Therefore, the future of social media will require professionals to be data-savvy to stay competitive. Big data has an added advantage of making professionals aware of future trends, which will be critical for their careers and innovation.

Using Online Communities for Lifelong Learning

Social media and online communities allow professionals to learn from one another and discuss best practices in ways that were previously impossible. Social media is useful for researching career options, exploring industry opportunities, discovering business opportunities, and informal learning (Cho & Lam, 2020). Joining groups relevant to your career and interests on Facebook and LinkedIn have proven to be of great value for professional networking. Online communities can enhance networking and collaboration opportunities, which can lead to career progression. A professional seeking advancement, whether within the same organization or in a different organization, can use online communities to help achieve this goal.

Social media and online communities can foster learning and stimulate thinking by providing feedback, commenting, liking, asking questions, sharing information, and providing clarity and encouragement through online social dialogue (Richmond, 2014). A deficiency of skills, fear of change, lack of motivation, shortage of time, and negative perceptions of social media can be barriers for optimizing social media for learning (Donelan, 2016). Practitioners can overcome these obstacles through training, sharing of good practices, and initiating dialogues within their organizations.

Social media can help professionals build useful connections for career management, yet some professionals may not be equipped with the up-to-date skill set of using social media for networking (Benson et al., 2014). Social media changes all the time, so it is important to keep up with the evolution of the platforms and to keep looking for ways to optimize your use of the available tools. It is essential for all professionals to gain hands-on experience and training using social media for their own professional development. Social media can serve as an informal education tool to continue to gain the skills and knowledge professionals need for the workplace to succeed and grow. Social media provides a place to collaborate and share knowledge to foster life-long learning opportunities.

Social media and online communities will continue to change the way students, professionals, and workers learn well into the future. Social media plays a critical role in life-long learning where it changes how people create, share, and participate in information-sharing. It also encourages users to renew outdated information and knowledge. Online communities facilitate the sharing of information among different people from different countries, backgrounds, and occupations. Using social media for life-long learning is an opportunity to bring people together to solve big problems in the world.

Building a Social Organization

Social organizations view social media and collaboration as strategic to their business to rally communities of people. Especially in times of crisis, it is a company's obligation to be as open and transparent as possible, as well as to communicate most expeditiously to those impacted. The most efficient way to do this today is online with social media. Building a network of supporters over time that aligns with a company's values and actions only helps support and protect a company in times of trouble.

Social media enables mass collaboration of hundreds, thousands, and even millions of people. Mass collaboration can occur through content creation, shared experiences, relationship building, and the engagement in other forms of productive work to achieve common goals. A social organization can tap into the power of mass collaboration to tackle important challenges and create new opportunities. Creating a social organization empowers employees to use social media to share ideas, solve problems, collaborate, and discuss best practices.

In our fast-moving global world of work, social networks give organizations the opportunity to improve internal and external communication. It is increasingly challenging to attract attention online while combating the difficulties of fake information distributed on social media. Building a strong voice online that can be trusted and seen as credible is more important than ever. The ability to reach large audiences and at rapid speeds is a huge advantage of social media. Leaders who can tap into the benefits of social media to improve the speed of communication with stakeholders will be one step ahead of their competition.

Every employee and leader has the opportunity to have a voice on social media and become a thought leader in their field or industry. Employees play an important role as brand ambassadors, providing credible, trustworthy, and authentic voices for the organizations they represent. Social media allows employees to form relationships and communicate with current employees, potential customers, friends, business partners, and future talent. As outlined in Edelman's Trust Barometer (Edelman, 2020), building trust can help an organization drive workplace recommendations, obtain stronger consumer advocates, build confidence with investors, develop a resilience against risk, and drive innovation in the marketplace.

According to a study by Cisco (2015), employee posts can generate eight times more engagement than when that same content is shared through a brand handle. Further, for many companies, their employees' networks are far greater than the company's brand handles. Employees are a valuable asset on social media, serving as advocates and brand ambassadors who help support and maintain the reputation management of an organization. An employee

advocate is someone who is passionate about an organization or its brand, and engages in activities, often on social media (Smith et al., 2018). An advocate's social media influence gains traction from their ability to connect like-minded individuals in publicly visible and accessible platforms. Employees can use social media to create better customer relationships, increase productivity, foster innovation, enhance reputation, and create positive change.

For your employees to spread information on social media channels, they have to be active on these platforms. Encourage employees to create profiles on social media channels such as Facebook, LinkedIn, Twitter, Instagram, and Pinterest. Many organizations provide social media guidelines and training for optimal results. Most importantly, employees must believe in their organization, be respectful of others, have the desire to work to make things better, and stay up to date with developments within their industry. Employees will need to have a clear understanding of the organizations vision, goals, and mission, which should be articulated and shared often in the workplace.

It is important for companies to encourage employees to be on social media and to build strong personal brands because it helps both the professional and the organization. Yet, even for those who regularly use social networks out of the office, it may not be appropriate for them to do so on behalf of the company. Therefore, no employer should insist that their employees become employee advocates on social media. Keep in mind that your organization does not have to start from scratch; there are numerous technology tools available to make it easier to create an employer advocacy program, including Social Reacher, Ambassify, Hoosuite Amplify, and LinkedIn Elevate.

Social media has been a core part of Dell's marketing strategy for years, and Dell has developed a pioneering social media monitoring and employee advocacy program. They were the first to encourage employees to find and share their own content in addition to what the Dell team provided them. According to Dell (2015), their employee advocacy program made their employees feel more connected while building trust and relevance for their customers on social media. Organizations will find that the best social media advocates are the employees with strong social media skills and a genuine feeling of gratitude for and pride in their workplace. Having employees deliver authentic messages regarding your organization through their personal social channels is contagious and highly credible. If a company is doing good and giving back to the community, encourage your employees to talk about it on social media. People want to do business with employees and organizations that are making the world a better place. Using employee advocates to help deliver messages via social media is an opportunity to build trust, credibility, and authenticity with both internal and external communities and stakeholders.

Creating a more social organization will continue to change with the advancement of social media tools. For example, Facebook has long believed in the promise of VR and are working on reshaping how companies everywhere think about remote work, communication, and productivity. Recently, Mark Zuckerberg announced a massive shift in how he plans to operate his company by allowing workers to request permanent remote status. He believes that augmented and virtual reality will give remote employees a sense of presence during meetings and other collaborative efforts. Facebook hopes to continue to improve social media with virtual technology, giving their own employees the opportunity to be constantly using it themselves for

the purpose of remote work. Over time as technology advances, we will be able to combine real and virtual worlds freely, changing the way we build communities and collaborate with one another. Creating a social organization will require innovative thought leaders willing to experiment with new technologies to continue to advance the way we work and collaborate.

Mindful Habits

Each of us must determine how to use social media for our personal and professional use. We know that employers are looking at the social media profiles of potential job candidates. Therefore, it is important that professionals are mindful about how they portray themselves on social media. Social media profiles with a primary focus on alcohol, strong opinions, and self-absorption, for example, could be a problem for future and current employers. Ultimately, employees and job seekers are free to use their social media platforms to post as they please. However, that does not mean they are free from disciplinary action by their employer or that they are not at risk of not getting hired because of the content they post.

Spend some time looking through your social media accounts as though you were a hiring manager. Based on what you see, would you hire you or do business with you? If the answer is no, ask yourself why and decide whether you stand by your posts at the potential cost of an opportunity. Consider deleting or archiving posts that could cost you a job or career opportunity. You may decide that you stand by your posts and are willing to face the consequences.

In an ideal world, we should all be constantly mindful of the type of social media content we both publish and consume. Social media can be addictive, and the first step to understanding the problem is awareness. Many of us would prefer to eat large amounts of junk food, but we know that we need to be mindful of how much we eat and what type of food we are eating to stay healthy. It is the same thing with social media. We need to be mindful of the amount of time we spend on social media, who we follow, whom we interact with online, and the type of content we are reading. We each have the opportunity to create positive and meaningful conversations on social media. Each of us has the power to decide how and when we will be using social media. We can choose to use social media in a way that is both healthy and productive for our professional careers.

There is no doubt that new technology and social media are here to stay, and they will increasingly change the way we work and connect with others in years to come. Through building positive habits, we can take charge of our social media use. In a world where outside noise is coming quicker and louder, taking a break on occasion from social media will help you be more productive in life. Consider taking a day off each week from social media to refresh your outlook on life. Taking a moment to recharge provides us with the stillness and quiet required to evaluate our lives and reflect on what we want to do next in more profound ways. Through removing distractions, our mind will have time to fully concentrate and be present in life in new ways (Charoensukmongkol, 2016). Powering down provides an opportunity to reset and refocus appreciation and gratitude for the good things happening in our lives. We all need to unplug on occasion to recharge, which will allow us to innovate and think more clearly about the future that we want to build. The more mindful we are of our social media use, the better we will be able to serve our communities and collaborate with others.

Future of Social Media

The more deliberate we are with social media, the more effective we will become in building engaging and meaningful online communities. Social media can create global settings for better communication, learning, innovation, new collaborations, and career opportunities using a strategic and mindful approach. Increased video usage, AI, VR, and big data will continue to transform the way we use social media in years to come. Professionals need to keep an open mind and learn about new technology to adapt and continue to thrive in an ever-changing workplace. Communities thrive when professionals work together to innovate and build bigger things than they could ever build alone. Take the time to nurture your online brand and relationships. Social media platforms have the potential to amplify professional development in ways never before possible. The future of social media is in your hands.

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CHAPTER 8: UNCERTAIN FUTURES: SUPPORTING UNEMPLOYED MID-TO-LATE CAREER ADULTS WITH SCHLOSSBERG'S 4-S TRANSITION MODEL

By Jacqueline Peila-Shuster

Introduction

In considering the future of work, career practitioners must also contemplate the ramifications of not working. Individuals who are unemployed are more likely than those who are employed to encounter issues such as depression and anxiety (McKee-Ryan et al., 2005; Paul & Moser, 2009; Tuncay & Yildirim, 2015), physical health problems (Thomas et al., 2005; Tuncay & Yildirim, 2015; von Bonsdorff et al., 2016), lowered self-esteem (McArdle et al., 2007; Paul & Moser, 2009; Tuncay & Yildirim, 2015), and loss of identity (McArdle et al., 2007). They also tend to report less social support and poorer coping mechanisms (Tuncay & Yildirim, 2015). Furthermore, according to a meta-analysis by McKee-Ryan et al. (2005), the harmful effects of unemployment are elevated for those who are unemployed for longer periods. Additionally, positive expectations regarding reemployment decrease as length of time unemployed increases beyond six months (Blau et al., 2013).

For those who are unemployed and in their mid-to-late career years, there can be additional difficulties and complexities with which they must contend. For example, those who were 55 and older encountered greater difficulty in finding another job after being unemployed (U.S. Bureau of Labor Statistics, 2010). Additionally, middle-age and older adults received fewer call-backs for low-skilled positions as compared to young adults (Neumark et al., 2017). Mid-to-late career unemployed adults also may face different types of decisions from those they encountered when first starting out in their careers. Buchs et al. (2017) found that compared to their younger counterparts, adults in their mid-to-late careers were not as likely to accept involuntary occupational downgrading, even if it would allow them to become reemployed more quickly. Additionally, adults in their later career years were less likely to risk losing occupation-specific skills to launch a new career or accept a lower position (Buchs et al., 2017). Also, midlife workers were more likely to avoid changing careers if they perceived themselves to be older than they suspected the average worker was in that new field (Ferraro et al., 2018).

Because unemployment can impact one's wellbeing, it would seem prudent to assist those who are unemployed to find a job as soon as possible. However, unemployment is a multifaceted issue in an increasingly complex world. In a meta-analysis of 104 studies reviewing psychological and physical wellbeing during unemployment, McKee-Ryan et al. (2005) found that "actively engaging in job-search activities is related to lower mental health for unemployed workers" (p. 68). Furthermore, negative emotional experiences of unemployment, such as discouragement, worry, and uncertainty, can make it difficult for adults to focus their efforts on searching for jobs (Wanberg, 2012). Thus, to be helpful, and to avoid doing harm, career practitioners need to take a pause before urging clients forward into an uncertain future.

Schlossberg's transition model (1981, 1984) can be useful in helping career practitioners and their clients take this proposed pause. More specifically, this model provides a framework to: (1) understand transitions from the individual's perspective and within their context, (2) consider one's assets, liabilities, and supports that are part of their means for coping with and navigating transitions; and (3) collaborate in developing strategies to successfully move through transitions. After describing the 4-S model, I utilize a case study followed by guiding questions to help readers apply the 4-S model. Throughout the article, I also strive to assist readers in becoming attuned to multicultural considerations when using the model.

Transition Framework

Schlossberg and colleagues (1995) defined a transition as "any event, or non-event, that results in changed relationships, routines, assumptions and roles" (p. 27). Their inclusion of non-events is noteworthy because it acknowledges that a transition can be triggered when an event that is expected does not happen. Examples of non-events could be not having a child even though one expected to have children or not getting a promotion one expected. Furthermore, transitions can be anticipated (e.g., retiring) or unanticipated (e.g., getting laid off or moving to remote work because of a pandemic).

Not all individuals experience similar transitions in the same way. To understand reactions to transitions, career practitioners need to delve into the individual's perspective, their context, and investigate the impact of the transition (Anderson et al., 2012). By attending to the client's viewpoint, career practitioners can gain a sense of how the individual regards the transition and whether it is perceived as positive, negative, or neutral. Contextual and cultural factors, including historical influences that cause societal upheavals, will have direct and indirect influences on the transition and on choices and resources available to the individual (Anderson et al., 2012). Furthermore, the individual's perception of the impact the transition has on their daily life is of great consequence. Clients may feel this impact through the amount that their daily life, roles, relationships, routines, and assumptions have been altered (Anderson et al., 2012).

Adults who are experiencing unemployment may have a great amount of change involved in their transition. Hence, it is imperative that career practitioners "consider these larger contextual factors in working sensitively with our clients" (Anderson et al., 2012, p. 45). Furthermore, it is critical to keep in mind that transition is a process, not a point-in-time event. Schlossberg's theory conceptualizes the process as moving in, moving through, and moving out of transitions (Anderson et al., 2012). Understanding that endings typically beget beginnings helps remind career practitioners that there may be grief and loss associated with the ending that moved the client in to their transition.

Multicultural Considerations

Before moving on to the 4-S system in Schlossberg's (1981,1984) transition model, it is essential to emphasize multicultural considerations. Opportunity structure, power, privilege, systemic racism, discrimination, and oppression are interwoven, and affect all parts of a transition, including options, assets, and resources available to some individuals, but not to others. Additionally, in approaching transitions through clients' worldviews and values, career

practitioners must comprehend that values are understood through the lens of socio-political-historical and cultural contexts. By stepping into, and honoring, the client's worldview, career professionals can increase their awareness of environments and systems that reinforce stereotypes, perpetuate oppression, and shape various forms of interactions (Whalen et al., 2004).

Moreover, to practice in a culturally competent manner, career practitioners must be thoughtful about how intersecting identities influence, and are influenced by, points of oppression and privilege. One's identities resulting from "gender, race, ethnicity, social class, sexual orientation, physical ability, and religion/spirituality do not exist in separation for individuals, rather, these features are inherently intertwined" (Yakushko et al., 2009, p. 180). Thus, individuals who hold multiple marginalized identities are liable to encounter additional and more complex impediments during their transition process. To gain insight into the client's worldview, career practitioners can assess what identities are most salient for the individual, what might need to be explored, and what is being impacted or making an impact.

Career practitioners must also be aware that "differences" are historically equated with inferiority and pathology through the process of scientific racism and white supremacy (Sue & Sue, 2016). Thus, one must consistently challenge oneself to break out of stereotypes and implicit biases to be inclusive of what optimal functioning may look like for other cultures and identities (Whalen et al., 2004). Additionally, it would be inappropriate to approach clients' situations with career counsel, guidance, or education that primarily originate from the perspective of dominant cultural norms, ideologies, and privileges. For example, educating a client about the job search through the lens of the dominant culture could do harm because that viewpoint often assumes access to political power, social capital, and/or material wealth.

4-S System

The 4-S system provided in Schlossberg's (1981, 1984, 2011) transition model serves as a roadmap for practitioners. By helping clients take stock of their situation, self, and supports, practitioners and clients then can partner to develop strategies for coping with and moving through the transition. The four S's include: (1) situation, (2) self, (3) supports, and (4) strategies. An overview of these is provided next. For a thorough review of the transition model, please see Anderson et al. (2012).

Situation. First, Anderson et al. (2012) recommend a close inspection of the situation at the time of the transition. There are a variety of circumstances that can influence the situation, including:

- the trigger, or what set the transition into motion;
- the timing of the transition, especially in relation to the individual's social clock;
- aspects of the transition that are within or beyond the control of the individual;
- the duration of the transition, for example, whether it is permanent or temporary;
- whether the transition includes a role change;
- concurrent stressors;
- the individual's experience with similar transitions; and
- one's assessment (positive, neutral, or negative) of the transition (Anderson et al., 2012).

Self. The self refers to what the individual brings to the transition and can include both assets and liabilities (Anderson et al., 2012). According to the framework, it is important to explore personal and cultural factors such as gender, sexual orientation, race, ethnicity, age/stage of life, state of health, and socioeconomic status. Additionally, individuals' psychological resources, or lack thereof, will influence their experiences. Psychological resources are those individual characteristics that one can draw upon to help them cope and may include elements such as how well one tolerates ambiguity; one's level of optimism, self-efficacy, and resilience; and one's values, spirituality/religion, and sense of meaning or purpose (Anderson et al., 2012).

Support. As mentioned earlier, adults in their mid-to-late careers may report lower social support when experiencing unemployment (Tuncay & Yildirim, 2015). This is problematic, in part, because unemployed adults who have strong support systems tend to have better mental health and life satisfaction than those who do not have support (McKee-Ryan et al., 2005). Thus, assessing the supports available to the individual during the transition takes on significant importance. Sources, or types, of support can include intimate relationships, family, friendship circles, and institutions/communities (Anderson et al., 2012). In evaluating the functions of supports (encouragement, affirmation, honest feedback), career practitioners and clients should reflect upon and appraise how helpful and/or useful they are in one's life. More specifically, while one may claim certain individuals as part of their support network, fully evaluating the functions of the support that person provides (e.g., affect, aid, affirmation, feedback) can help ascertain if the support is an asset or a liability (Anderson et al., 2012). For example, an individual could have someone in their support system who is not supportive in ways the client needs them to be, such as providing encouragement or constructive feedback.

Strategies. Unemployed individuals were found to be less likely to partake in positive coping behaviors, which connected to their psychological distress when unemployed (Tuncay & Yildirim, 2015). This finding reinforces the importance of assessing an individual's typical style of coping, as well as developing, enhancing, and implementing coping strategies. The 4-S system categorizes coping strategies along three primary functions: (1) strategies that modify the situation, (2) strategies that change the meaning of the situation, and (3) strategies that manage stress (Anderson et al., 2012). Part of determining an appropriate strategy depends on whether the situation can be changed or not (Lazarus & Folkman, 1984). If it can be, then the individual may choose more problem-focused coping strategies, and if not, then one may seek to engage in emotion-focused coping strategies (Lazarus & Folkman, 1984). Anderson et al. (2012) pointed out that those who are more effective in coping are flexible and use a variety of strategies since coping is a dynamic process that must adapt in accordance with the changing situation and the individual's appraisal of it.

The 4-S model (Schlossberg, 1981, 1984, 2011) can guide practitioners in pausing and assisting clients to assess the situation, themselves, and whom they can call on for support. In taking stock, clients can identify and enact appropriate coping strategies that progress them through the transition in a positive manner. Next, a case study and questions meant to stimulate reflection are provided to facilitate readers' application of the model.

Case Study

Sarah is 56 years old and identifies as a Latina woman of color who is cisgender female, heterosexual, Christian, and middle class. She has three children; two identify as female and one identifies as male. She reports that one of her daughters is married, the other is in a relationship with another woman, and her son just left for college. Sarah indicates that her husband has reacted negatively to their daughter recently coming out. This has been a source of tension between them. She states that she has supportive friends in her church.

Sarah worked for 20 years as a bookkeeper and her husband runs his own construction business. They have struggled financially at various times due to fluctuations in the construction business, but her income typically helped stabilize them. She says they were always able to “bounce back from the tough times.” Sarah was laid off approximately one month ago. Between the layoff and recently having the last of her children move out of the house to go to college, she has been experiencing bouts of anxiety and depression. She is coming to career counseling at the advice of one of her daughters.

In terms of interests, Sarah enthusiastically talks about articles and books she has been reading regarding women’s and Latinx issues of discrimination and oppression. She also mentions that after graduating high school she had started a 4-year degree in Political Science, but left school when she got married. Sarah has served on various community committees and coordinated numerous fundraising drives for her church. She found these activities to be invigorating, especially because the end goal involved helping the community. In describing her thoughts about the possibility of doing advocacy work surrounding discrimination and oppression, she relays that it may be “too late” to make big changes in her life.

While relating that her husband was supportive of her previous bookkeeping job, Sarah states that he recently asked her why she wants to find work again. His construction business is doing well so he thinks she should “just relax” after being a working mother for so many years. Sarah’s parents agree with her husband. Furthermore, she has had some extended family members tell her she’s “too old” to start something new.

When prompted about potential supports that have made her feel optimistic, Sarah indicated that her previous supervisor has offered to be a reference, as have various individuals with whom she has worked on community boards. She also asserts that her friends from church have been supportive of her ideas regarding advocacy work and have provided her with contacts.

Applying the 4-S System

Multicultural Considerations. First and foremost, all that occurs while working with Sarah must be grounded in a multicultural lens that honors her experiences and values. Further exploring her identities, how they intersect, and their salience can facilitate greater critical consciousness (Freire, 1970) for both client and helper. The career practitioner will need to explore their own implicit biases and contemplate how they can be an informed and culturally competent helper for Sarah. In exploring Sarah’s situation, the helper must gain greater clarity on Sarah’s worldview, her values, and how she perceives her situation. The importance of this

process cannot be overstated because if the career practitioner simply moves to the action phase, then they may start advising Sarah from the viewpoint of career education models that are based in privilege. This would not be effective in addressing the systemic oppression, inequities, and injustices that Sarah has encountered throughout her life.

Go through the case and reflect upon your initial reactions, thoughts, and beliefs. What assumptions do you have? What might you need to reconsider or further explore? How might your lens influence your view of Sarah and her situation? What might you misunderstand because of your lens? How will you explore Sarah's intersecting identities and what that means for her?

Situation. By fully exploring the situation and ascertaining Sarah's view of it, the career practitioner can better empathize with Sarah and consider the broader implications of her transition and its effect on her life. How Sarah perceives her situation is what matters because that is her reality. Thus, as you read the case, try to still any racing thoughts for a moment and put yourself in Sarah's place by focusing on what she is saying.

Review the various components listed in the "situation" section of this article. What was (were) the trigger(s) for this transition? How is Sarah viewing this transition in terms of her social clock? What can she control and what is out of her control? Consider the role changes Sarah is undergoing and how those may affect her assessment of the situation. What else is going on in Sarah's life (concurrent stressors) that are also influencing her perspective of the situation? Is there enough information to know how Sarah is perceiving the transition? If not, how would you go about discovering that with her?

Self. Personal and cultural factors will influence how Sarah experiences and moves through this transition. Intertwined with her psychological resources are her cultural identities and the experiences she has had as a Latina woman of color. It will be essential to understand her values and how she gains a sense of meaning and purpose in this world. Her recent experiences as a mother of a daughter who has come out also may influence the psychological resources that she believes are available to her. Also keep in mind that some resources and options may not be as readily available or known to her as they are to others with more privileged identities.

As you think about Sarah, how might personal and cultural factors be influencing her transition? How would you broach that conversation with her so she can feel comfortable with disclosing how oppression and discrimination have been a part of her life? What hunches from the case study do you have about her levels of resilience, optimism, and self-efficacy? What are your thoughts regarding her religious community and how that may serve her? Can you ascertain what some of Sarah's values may be? How would you explore those with her as resources in helping her with this transition?

Support. There are differing social circles, and individuals within those circles, that may provide varied levels and types of support for Sarah. These sources of support may help bolster her psychological resources, provide advocacy for her, and afford her with that ever-important social capital often needed in career transitions. Her support options must be assessed carefully, though,

to best know how to utilize them in ways that will elicit positive outcomes and honor Sarah's cultural values and beliefs.

Based on the case study, what social supports might Sarah be able to utilize? How would you go about helping Sarah assess the functions these supports serve for her? How might you help Sarah manage relationships that are not currently as supportive as she desires? How will you increase your cultural competence as you work with Sarah in assessing and drawing upon her social supports? Are you keeping in mind that accessibility and social capital can be influenced by one's points of privilege and oppression?

Strategies. It will be helpful to assess what strategies Sarah has already implemented, as well as what types of strategies have worked for her in similar situations in the past. It is probable that Sarah will need an array of strategies to successfully move through this transition. By appraising how she typically copes with challenges, the career practitioner may be able to better identify how to support, counsel, and encourage Sarah as she navigates her current challenges and those that arise along the way.

In looking back through situation, self, and support, as immersed within multicultural considerations, what issues lend themselves to strategies that modify the situation? Will there be some areas where it may help to change the meaning of the situation or circumstances? How might you work with Sarah to manage her stress and take care of herself, so she is better able to successfully progress through this transition? As you go through these questions, notice how you are tying in her perceptions of the situation, her psychological and cultural resources, and her social supports as part of these strategies.

Conclusion

Schlossberg's (1981, 1984, 2011) 4-S model is useful in reminding us to suspend our preconceived notions and enter our clients' worlds. This is imperative in today's turbulent times with a future that is uncertain at best and calls upon us as career practitioners to advocate for greater inclusion, equity, and justice. We, as career practitioners, can be more useful to clients if we choose to avoid moving into advice giving or career education delivery before fully and deeply hearing the client's story. We need to engage in dialogues where we genuinely listen and reflect client's emotions, thoughts, and stories back to them in meaningful ways. To do otherwise could cause us to propel them towards action that is founded in our own worldview. Without taking a pause, meeting our clients where they are, and honoring how they want to move forward, we can do harm. By helping clients take stock of their situation, resources, barriers, and supports, we are better positioned to partner with them in developing successful strategies for moving through unemployment and engaging with their future.

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CHAPTER 9: THE OFFICE OF THE FUTURE: PHYSICAL SPACE, PROTECTION AND PLACE

By Ann Nakaska

What will the workplace office of the future look like?

Will companies continue towards more open-office workspaces, or will the effects of the COVID-19 pandemic force organizations to create more room or barriers between workers? Do open-space workplaces increase creativity or introduce more workplace distractions?

With the internet of things connecting more and more of our devices, will employees be monitored 24 hours a day for productivity levels? Will employers require all employees to wear wristbands or badges so their every movement can be tracked?

Will we increasingly work from home or work from anywhere, and what are the differences? What are we learning about working together that will guide us to create healthier, more productive workplaces?

While companies, especially big technology companies, have been creating their vision of the future workplace, the pandemic disrupted our work and left its own mark on how we will work in the future. The purpose of this article is to examine current trends in the workplace with the hope of determining which trends are here to stay, changing the way we will work in the future.

We will explore the three Ps of the future workplace and answer the following questions:

- Physical space: What will office space and workplaces of the future look like?
- Protection: How will employee monitoring be used in the workplace to benefit both employers and workers?
- Place: Where will we work geographically?

Physical Space: Office Workspaces and Workplaces of the Future

Over the last few decades, the technology companies in the Silicon Valley have been redesigning traditional workspaces and pushing the boundaries of workplace design. Apple Park, corporate headquarters of Apple Inc, is an example of how the modern workplace is being redesigned to incorporate the use of green energy, providing opportunities for employee physical fitness, and moving towards work with more work–life balance. Companies wanting to appear cool, and trendy have been adopting many of these new workplace designs by creating huge open areas with lots of meeting spaces for teams to collaborate.

However, the pandemic challenged how we will work in the future and whether we even need office buildings. The pandemic accelerated the use of teleconferencing and working from home. However, since the pandemic, we also have more questions about open workspaces and

employee health. Will we ever go back to working closely with others, or will open workplaces be viewed as a breeding ground for pathogens? What types of office space encourage people to be more productive?

Kallio et. al. (2015) stated, “the design of physical environment plays an implicit yet significant role in developing a culture that promotes organizational creativity and knowledge sharing. It affects equality, openness, and collectivity of an organization’s culture.” It is important to note that workplace design can also be influenced by both organizational and cultural factors. When examining the physical workplace, we will explore open workplaces versus cellular or individual workspaces, the employee’s need for privacy, and office space for team collaboration.

Open Workspaces versus Cellular Spaces

According to Schwab (2019), a study by the International Facility Management Association reported that 68% of employees currently worked in an office with low walls or no walls. Schwab also stated that employees hated these open offices. They found these work areas distracting, loud, and lacking privacy. Employees often leave for these reasons. Schwab also reported that research found people who work in open workspaces take two thirds more sick days. In the wake of a pandemic, health concerns may be the biggest influence on office design of the future.

When considering open workspaces versus cellular spaces, we need to determine the difference between distractions and interactions. Most companies have moved away from cellular spaces to save on office costs, but also to encourage more interaction between workers, which can raise productivity. What has happened in many workplaces is that open workspaces increased the number of distractions, which decreased productivity. In research projects with a variety of organizations, Bernstein and Waber (2019) found that design structures created to increase interactions and collaboration have in fact led to less interaction, or at least less meaningful interaction. Waber, a PhD from the Massachusetts Institute of Technology’s Media Lab and the CEO and president of Humanize, wrote the book on human analytics.

A mega-analysis by the University of Salford, led by Al horr et al. (2016) confirms Waber’s work, identifying that open workspaces led to lower productivity overall and more stressful work environments. Both Wertz (2019) and Shellenbarger (2013) refer to this mega-analysis study when discussing the future of open-space workplaces.

Bernstein and Waber (2019) found that not only are open workspaces more conducive to employee interruptions, but workers also tended to withdraw from interpersonal conversations and would avoid making eye contact with fellow workers to prevent interruptions. Employees also speak less with colleagues in open areas because they are more sensitive about interrupting coworkers, thus reducing the amount of their person-to-person communication.

Just how much distraction is happening in open workspaces? Brill et al. (2001) found the following rates for distraction frequency:

- open-plan office: 65%

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- double-occupancy spaces: 52%
 - single-room occupancy: 29%

For workers who need to focus on a particular project, these rates demonstrate how difficult it can be to work in an open area, and the importance of having access to cellular or individual workspaces.

The literature suggests that workplaces need to be specifically designed for the type of work processes being done within an organization. “The office layout of an organization should be well designed to ensure efficient work process to enable organizational success. Open office versus cellular office mismatch leads to process productivity loss” (Laing, 1998).

While many companies are moving more and more towards an open workspace design, the literature would suggest that a mix of open and cellular workspaces specifically designed around work processes would produce better results in office productivity.

Need for Private Spaces

When offices moved to open-concept design, what was the price of having little or no worker privacy? Yildirim et al. (2007, as cited in Al horr et al., 2016) found that the more an organization decreased visual and acoustic privacy, the more employee dissatisfaction increased. Workers need privacy in their workplace for a variety of reasons. They may need to:

- make phone calls involving confidential client information
- do work requiring a high level of concentration
- discuss overly sensitive or private information with supervisory staff

As already discussed, working in open workspaces can be very disruptive because of all the workplace distractions and interruptions. Mark et al. (2008) found that after only 20 minutes of interrupted performance time, people reported significantly higher stress, frustration, and pressure.

If 68% of workers are working in open workspaces, and if the frequency of distractions in open workspaces is 65%, how are employees handling the constant interruptions?

According to Bernstein and Waber (2019), it seems that employees find creative ways of letting their co-workers know they are unavailable to interact. These techniques include avoiding eye contact; wearing noise-cancelling headphones, hats, or colored armbands; and according to Schwab (2019), even placing yellow barricade tape around the opening of their cubicle. While open workspaces are cheaper for employers, open-concept workplace distractions obviously also lead to a loss in productivity, increasing company costs.

Bernstein and Waber (2019) worked with a manufacturing company with two types of meeting spaces, studying the number of worker interactions that took place in each of the two areas. One space was totally open and the other had movable white boards. Over 50% more worker interactions took place in the area with the movable white boards, suggesting that if people have

some sense of privacy or physical boundaries with other workers, they are more open to interactions with their coworkers.

This recent research is supported by a comprehensive report prepared by Brill et al. (2001). By studying over 10,000 workers from 40 organizations across industry sectors for 6 years, their comprehensive and research-based report dispels many of the open-office myths. They discovered that while managers may have spent about half their time (48%) doing focused quiet work, all other types of workers, including professional, engineering, technical, and administrative employees, spent roughly 60 to 65% of their time doing quiet focused work. This highlights the need for most workers to have access to quiet private space.

Even though Brill et al. (2001) dispel the myths of open-space work in their research, 20 years later businesses still believe that open concept means open communication, more communication, and more productivity. Their research found that when workers had their own private workspace, they had higher job satisfaction, were better team players, had more productive meetings, did more focused work, learned more from others, and communicated better with their peers. Having even small workspaces was better than working in areas of high distraction.

But what about breaking down walls and breaking out the creative juices in the work environment?

Areas for Team Collaboration

What is the best office design for team collaboration? Using data analytics, Bernstein and Turban (2018) discovered that when a Fortune 500 company they were working with transitioned from a more traditional cellular workspace to an open workspace, face-to-face interactions dropped by 70% while electronic interactions increased. So, if people were physically closer together, what was the reason for less face-to-face communication? Bernstein and Waber (2019) stress that collaboration is an action that people choose to do, not an action that will simply happen because of physical space design. They also found that when physical walls come down, people create invisible walls—what many actors call a fourth wall, an imaginary wall that separates an actor from the audience.

Brill et al. (2001) also support these findings. Workers communicate the most with other workers when they have private offices, by a large margin. Workspaces with no enclosures were found to support communication and interactions by only 58%. The more workspaces were enclosed, the higher the amount of communication and interaction, with private enclosures shown to support communication and interaction by 98%.

Bernstein and Waber (2019) discovered that team-member locations also play a big role in physical and digital interactions. The further away coworkers are from each other, the less they communicate. Sociology has long proven that proximity predicts social interaction.

Bernstein and Waber (2019) also identified that companies did not always have to change their physical workspaces to create more meaningful interactions between their employees. Hosting

social events, such as company barbeques, were just as likely to increase employee interaction as creating the right workspace. At Humanize, Waber and his company found that simply changing the locations of coffee machines could impact team and employee interactions.

Brill et al. (2001) found that what did improve interaction and communication was the ability for workers to meet and talk in open spaces close to their private workspaces. They recommended that workspaces have areas of many small private offices that open down short “streets” to small meeting areas, which connect to larger “main streets” with social areas and resource areas separate from most private offices.

Even after 20 years, much of Brill et al.’s work supports research from new data analytics that show that people need areas to work privately, close to their teammates, with separate larger areas for greater socialization.

Protection: How is Employee Monitoring Being Used in the Workplace?

Employee monitoring: Is it a concern for employee health and safety, a desire for optimum efficiency, or a need to control employee activity? George Orwell’s futuristic novel, *1984*, predicted the constant monitoring of citizens and the dystopia it ultimately created. Can employee monitoring ever be for good? Is it ever necessary? We will look at the concept of tracking employees from the point of view of both the employer and the employee.

The Employer

There are many reasons employers may want employees constantly monitored, which may include collecting data on the quality of work as well as concerns for health and safety. In an Accenture survey, 62% of employers were using technology to collect employee data. Companies collect data and monitor employees for a variety of reasons, for example:

- Their work is confidential or of an extremely sensitive nature.
- They are experiencing high volumes of shrink or theft.
- They have concerns regarding work related injuries and worker fatigue.
- They want to ensure employee safety by monitoring their exposure to toxic or harmful chemicals.
- They are looking at a new design for the workspace and want to maximize employee productivity.

Although we often think of employee monitoring as bad for employees, it can often create safer workplaces, such as in dangerous mining operations.

The Employee

While employers may see many benefits to monitoring, employees felt only one third of employers were using collected data responsibly. Microsoft uses a productivity scoring tool that analyzes every employee activity using 73 pieces of granular data.

Employees have a right to be concerned about the use of this data and about an invasion of privacy. Laws are starting to catch up, but currently consumers have far greater access to privacy laws than employees (Sheng, 2019).

Companies such as Amazon use ultrasonic bracelets to track employees and detect the worker's exact location. Walmart uses technology to listen in on employees so they can know how many items have been checked and how employees are greeting customers. Microsoft's workplace analytics can track time spent on emails, how long employees spend in meetings, and if they are working after hours (Sheng, 2019).

Employees are much more likely to be in alignment with employers tracking their movements if the employer is transparent about the surveillance and if the employee understands the reasons for the monitoring.

It is also important to understand the difference between individualized surveillance and anonymous surveillance. Companies such as Humanize, run by Ben Waber, state that employee tracking can be done anonymously (Schwab, 2019). Employees for the most part do not need to be specifically identified for employers to obtain a wealth of information needed to improve productivity and workplace efficiencies.

In Schwab's (2019) article, Waber contends that emails can be scrubbed of addresses and subject lines, employees can wear badges with anonymous identifiers, and those who don't want to participate can opt out by wearing fake badges, so they are not singled out for not participating. This way, a company can track how much time employees spend sitting and standing, track where and how they spend their time, and understand how much time is spent in face-to-face interactions. This allows analytic companies like Humanize to still track employees, gather anonymous data, and use that data to create better workspaces and improve operations without compromising employee privacy.

In working with our clients, career development professionals should discuss employee monitoring with their clients, making them aware that employee monitoring does happen, the reasons for it, and when employees should be concerned. It is important for workers to understand the different types of monitoring, such as for health and safety reasons, and to understand that important organizational data can be collected in a way that does not identify each individual worker.

Place: Where Will We Work From?

In 2005, Feller and Whichard discussed the idea of "nomadic businesses." They asked the question "Where will workplaces of the future be located?" and replied with the answer "everywhere and anywhere as long as they have the basic infrastructure"

The pandemic has permanently impacted our current work culture. While we were becoming more and more accustomed to working from home (WFH), the pandemic accelerated this trend. This led to improved platforms, which led to greater comfort in using these technologies and greater efficiency in working from home. Why work in the same building, state or even country? Why not work from anywhere (WFA)?

During the pandemic, companies quickly put in place long-term WFH policies to keep their employees safe. Now that we have been working from home for over a year, employees are asking, do I need to return to the office? Ever? Companies are asking, do we need an office building, and do we need everyone to return to the office or only some people?

Working from home usually implies that workers will have somewhat flexible schedules and will work in both the office and from home, moving seamlessly between these two workplaces. It usually implies that the worker and the organization are in the same locale. Work from anywhere may mean never going into the office ever again. Are companies willing to take WFH that far? What are the benefits and the downfalls?

The Benefits

As Choudhury (2020) points out, there are many benefits in WFA for employees, employers, and society as a whole:

Employees benefit because they can:

- live in areas with lower rent, cost of living, and taxation rates
- be closer to friends and family
- have access to grandparental babysitting
- work in the same geographic region as their partner, neither having to compromise their career when the other changes jobs
- live closer to favourite outdoor amenities or recreational activities
- live in warmer climates or in places with better views
- become digital nomads, moving continually while working and travelling the world
- work for international companies without worrying about work visas

Employers benefit because they can:

- save on real estate costs by needing less workspace, a saving of \$38.2 million for one company alone (Choudhury, 2020)
- hire the best workers from around the world and not worry about immigration and visas
- pay lower salaries to employees living in lower cost-of-living areas
- experience an increase in productivity from happier employees, such as a 4.4% increase in the United States Patent and Trademark Office's patent output (Choudhury, 2020)

Society can benefit because:

- small towns and rural areas can attract more people because workers can now populate less expensive locations

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- less commuting means more family time and more active lifestyle time, contributing to great overall work–life balance and better mental and physical health as a society
 - less commuting time means less greenhouse gas emissions from less traffic
 - more time is available for community involvement and volunteering

Just what kinds of benefits are we talking about? In 2015 alone, Choudhury (2020) shared that the United States Patent and Trademark Office’s “remote workers drove 84 million fewer miles than if they were travelling to headquarters, reducing carbon emissions by more than 44,000 tons.” Clearly, we can see that there are many benefits for everyone by moving to more and more WFA models.

The Downside

Choudhury (2020) refers to research he conducted with Chauvin et al. (2020), which identified that changes in daylight saving hours and the resulting reduced number of business-hour overlap caused a 9.2% reduction in communication between global offices. They found that this total communication reduction was a result of a 10.7% decrease in scheduled calls and meetings and an 8.7% decrease in instant chat volumes. When the company gained shared hours, unscheduled calls increased by 17.6%. The greater the number of time zones that businesses work within, the more difficult it becomes for teams to find time to work together.

Bernstein and Waber’s (2019) work identified that while remote work is more cost effective, it does not always lead to better team collaboration. In fact, while studying a major technology company for four years, they determined that remote workers were communicating up to 80% less than collocated employees. In 17% of projects, they found that the coworkers had not communicated at all, demonstrating that it is better for teams and project members to be in the same workspace and ideally on the same floor.

However, they also found that a way of resolving this communication issue is to move from synchronous communication styles, such as Zoom, Skype, Microsoft Teams, and Google Hangouts, to using more asynchronous methods of communication, such as intercompany portals and cloud-based document sharing.

While there can be increased communication problems, one company, Gitlab, found that using more asynchronous communication can lead to sharing unpolished work and more feedback with early ideas and plans, resulting in what they call blameless problem solving and better solutions to work projects (Choudhry, 2020).

The ability to learn from coworkers over time may also be compromised with remote work. The downfall of working from home is the inability to simply ask a colleague sitting next to you a quick question. A lot of learning at work is done this way: quick microbursts of learning throughout the day, as well as observational learning. This would be missed if companies move to strictly WFH and WFA models. However, this belief is not supported by Brill et al. (2001), where they found that people learned less in open spaces and more in private work areas where greater communication and interactions happened.

Lastly, a downfall of WFA models, is that they give companies an excuse to pay people less when moving from areas of higher costs such as larger urban areas into areas of lower costs such as small towns and rural areas. It is a benefit for the company because they can save money by spending less on salaries, but it creates problems for employees who will now give up larger salaries when moving. It also has the potential for creating real estate issues in many larger high-cost cities, such as New York and San Francisco. It could also lead to a general reduction in wages across the board, further encouraging more people to move away from larger high-cost cities.

What does this all mean moving forward? Is WFH and WFA a workplace trend that is here to stay, and has the pandemic left a permanent mark on the workplace? We will know soon enough. According to Kelly (2020), “Kate Lister, president of Global Workplace Analytics, said, seventy-seven percent of the workforce say they want to continue to work from home, at least weekly, when the pandemic is over. Lister estimates, twenty-five to thirty percent of the workforce will be working from home multiple days a week by the end of 2021.”

While some companies, such as online classroom Lambda, rolled out permanent WFA policies, other companies, such as Apple, requested that their employees come back to work during the pandemic on a limited basis. Companies such as Twitter, Square, Shopify, Coinbase, and Facebook have all adopted WFH policies, with some embracing the digital trend and moving more towards permanent WFH policies (Kelly, 2020).

There may be other reasons for not fully embracing WFA models. Apple has always been very tight on security, and WFA models leave companies more vulnerable. While Box has been adopting and ramping up their WFA platforms, giving their employees, known as Boxers, the opportunity for lots of flexibility in where they choose to work. However, their CEO, Aaron Levie, also recognizes the social aspects of the workplace, such as mentoring, social interactions, office hubs, and the creative aspect of working together in person. He has suggested that post-pandemic, they will be returning to a hybrid model (Choudry, 2020).

Whether or not companies embrace this workplace trend of WFH or WFA will most likely depend on how much of the company’s work can be done digitally. Some workplaces and industries, such as factories and warehouses, will never be able to convert to all WFH or WFA models.

Conclusion

What can we expect the future to hold for our clients as they move forward into the future workplace? Certainly, work by Brill et al. (2001), which has been supported by Bernstein and Turban (2018) using sophisticated data analytic technology, strongly demonstrates that the trend of using mainly open workspaces is not in the best interest of either the employer or the employees. Open workspaces lead to increased distractions and interruptions, which in turn lead to employee dissatisfaction. Brill et al. supports the need for private workspaces, even if those workspaces are small, with open workspaces for employee interactions close by. The mega-analysis by Al horr et al. (2016) also supports the idea of “creating innovative

workplaces/combi-offices that allow occupants to transfer information and concentrate on work yet have shared interaction zones.”

Most likely, as more and more wearable devices are used to monitor workers, the research by Al horr et al. (2016), Brill et al. (2001), and Bernstein and Turban (2018) will be further supported, and we will see the move away from mainly open workplaces and a trend towards a combination of small private offices with interactive work areas close by for teamwork. With more employee monitoring, we should be able to identify the best ways to help employees work together collaboratively and help individual companies better plan the right amount of open and cellular workspaces for their company.

In a Utopian world, idea of companies using open workspace design to create a collective intelligence like that of social insects will likely not happen for reasons that Bernstein and Turban (2018) discuss in their paper. The human brain may find the distractions of working in large open groups counterproductive to creating exceptional collaborative work.

With the increase of interconnected electronic devices and wearable devices, the expanding internet of things will make is easier and easier to monitor and track workers not just during work hours but off hours as well. Our devices are becoming more and more interconnected, and this trend is unlikely to change. What we can hope for is that employers will become more responsible in collecting employee data and in how they use it, and privacy laws will hopefully catch up with employee monitoring in the workplace.

Lastly, we will have to see what the impact of the pandemic will be on WFH and WFA policies. How much we will want to work with other people in offices may end up depending more on people’s inclination towards extroversion and introversion than on office design or technological advances. What will most likely happen, as CEO Aaron Levie stated for his company, is that we will develop hybrid models that will allow companies to tie workplace design more and more to individual company needs. At the end of the day, how effective WFH and WFA are will depend on many of the same reasons workplaces are effective: How much noise and distraction are there at the home office, and how much privacy do workers have at home? The research found in the mega-analysis by Al horr et al. (2016) and work by Bernstein and Turban (2018) are just as relevant for home offices as for the organizational workspace.

In the end, we let’s hope that the combination of employee monitoring and the ability to gather rich employee data will offer organizations the ability to get it more right than wrong in developing what is best not only for employers and workplace design but for employees to truly become workplace nomads with the power to work and connect with people from anywhere.

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SECTION 3: HOW CAREER PRACTITIONERS WILL WORK IN THE FUTURE

CHAPTER 1: RACISM AND THE FUTURE OF WORK

By Whitney Erby, Camille Smith, David Blustein, and Alekzander Davila

The question of how we will work in the future has become even more complex at the outset of this decade as the world faces a life-threatening pandemic, massive work disruptions, and the unavoidable knowledge that racism is eating away at the fabric of a decent and dignified life for so many people. Considerations of the future of work have typically focused on automation and other predicted and unexpected changes that are transforming the labor market (Blustein, 2019). We believe that a fuller envisioning of the future of work needs to include an explicit discussion of race and racism. In this article, we seek to foreground the role of race in career development, with the intention of describing how our field (and the broader society) can contribute to a more equitable and affirming work life for all our citizens.

The history of race and racism is weaved into the essence of work and career. The United States and many other countries in the Western hemisphere live with the consequences of the slave trade, which resulted in the forced enslavement of millions of African citizens to work in the plantations, farms, and homes of White people (Kendi, 2019). The legacy of slavery continues in the ongoing disenfranchisement of Black people in the United States and other countries across the globe. The marginalization and racism that persists toward people of color is particularly evident in their work lives, as reflected in huge wealth gaps, discrimination at work, bullying, harassment, and other aversive actions that denigrate and humiliate people as they struggle to sustain themselves and support their families (Flores et al, 2019; Perry & Pickett, 2016). In our view, projections about the future of work necessitate honest and authentic dialogues about racism. In this article, we chart the history of racism in the working context and conclude with a vision of the future that embraces an anti-racist agenda to promote equity and decency at work.

As discussed above, racism is an incessant issue that has afflicted the United States since its inception. As openly hostile Jim Crow overt styles of maintaining White supremacy were made illegal by the Civil Rights Act of 1964, this form of racism also became less socially acceptable, and more covert forms of racism took their place (Bonilla-Silva, 2002). Contemporary racism often materializes in the form of institutional inequality, racist policies, and implicit biases and behaviors (Helms, 2020; Kendi, 2019). One modern form of racism is known as color-blind racism, or the notion among White people that racism is no longer an issue, and that race does not impact the opportunities available to Black people (Neville et al., 2013).

Color-blind attitudes are often exhibited in the form of racial microaggressions, or interracial interactions that exhibit indifference or contempt and are often subtle and at times unintentional (Franklin & Boyd-Franklin, 2000; Pierce, 1970). When microaggressions are considered individually, some may perceive them as innocent, but the cumulative impact of these “stunning blows” can be harmful (Pierce, 1970, p. 266). Studies have shown that experiences of racism and microaggressions are linked to mood disorders (Chae et al., 2012), symptoms of depression (Sue et al., 2008), suicidal ideation (O’Keefe et al., 2015), stress (Carter et al., 2017) and psychological trauma (Franklin et al., 2006). Racial microaggressions can take place in every facet of society, including the workplace.

Work is an essential aspect of life that can fulfill an individual's survival needs and can provide a source of self-determination and social connection (Blustein, 2008; Duffy et al., 2016). Yet, work can also be a source of oppression, and continues to be one of the areas of society where racism persists (Blustein, 2008). From hiring biases to increased job instability, people of color have a significant history of being deterred from access to decent work in the United States (Flores 2013; Fouad 2007; Leong & Flores 2015.) Black employees consistently report being less satisfied with work than their White peers, regardless of their education and income (Foley & Lytle, 2015; Mukerjee, 2013). In the academic field, Black faculty report that their credentials are often questioned and that they receive inadequate mentoring, resulting in fewer opportunities to advance their careers (Constantine et.al., 2008). Given that the experience of racial microaggressions is common for Black employees, and with an understanding that the effects are pernicious, relying on a more progressive and encompassing model of how race and racism impacts career choices for Black people is crucial. In response to the challenges of oppression and marginalization, Blustein and colleagues (Blustein, 2008 Duffy et al., 2016) developed a new framework and theory—psychology of working theory (PWT)—that we believe can inform a vision of the future of work that is able to identify and combat racism.

Psychology of Working Theory and Race

In the history of the career development field, the majority of theories have centered around individuals who have some degree of volition in their careers. For instance, Super's (1980) theory about career development across the lifespan includes "exploration" as an initial developmental task, reflecting an assumption that workers typically have the option to explore a range of vocational possibilities. To address this limitation of early career development theories, PWT was created to inform research and practice about the role of work in everyone's life, including those with considerable privilege and those who have been on the margins of society and the world of work (Blustein, 2008; Blustein et al., 2019). A key aspect of PWT is the foregrounding of economic constraints and marginalization, which are viewed as powerful factors in determining how people manage the tasks of developing and implementing a meaningful work life. Both of these macro-level factors, which are central in PWT, clearly identify forces that serve to perpetuate racism, thereby conveying a clear message to scholars and practitioners in career development that race matters. In our view, PWT provides a useful framework for informing individual and systemic changes that will support an anti-racist vision of the future. (See Blustein et al., 2019 for further details about how PWT serves as a theory of change.)

Race and the Future of Work

We believe that issues of race, racism, and other forms of marginalization will be as important in considerations about the future of work as are current concerns about robotics. To create the template for a work world without racism, we need to create a vision of what that life might look like. As noted earlier, racism enters the workplace at nearly every possible portal, including education, training, hiring, advancement, work climate, and pay/benefits. The first level of this vision should include a commitment to an anti-racism agenda. Building on Kendi's (2019) insightful recommendations, we believe that citizens of multi-racial societies need to understand how racism pervades their lives, consciousness, and contexts. Acknowledging that racism

manifests via the manipulation of power relationships is a critical step in developing a commitment to anti-racism. (We recommend that readers consult with Kendi [2019] for a detailed set of recommendations about becoming an anti-racist.)

While the existence of racial disparities in many aspects of life, including education, healthcare, and economic opportunities, has been well documented, the COVID-19 pandemic and the public outrage over the recent murders of George Floyd, Breonna Taylor, and other innocent Black people have made these disparities more difficult to ignore. These recent events have made issues of racism more salient in our national collective consciousness and have left many pondering how we can contribute to positive change. The first step in creating a vision of a more just workplace needs to begin with recognition of the gravity of the problem of endemic racism.

Researchers and activists have proposed that work has the potential to contribute to anti-racist policies (Kendi, 2019; Perry & Pickett, 2016). As noted above, scholars have repeatedly discussed the negative correlation between racism and well-being (Carter et al., 2017; Franklin et al., 2006; Paradies et al., 2015). Given that a major goal of career development practitioners and scholars is to enhance an individual's well-being both at work and beyond, it is important to better understand how career professionals can better support people of color.

Structural Racism at Work: Creating Individual and Systemic Change

This section will provide several recommendations from an organizational and individual perspective that can create needed changes to create anti-racism norms and policies in the workplace. First, organizations should evaluate, consider, and challenge policies, practices, and procedures within their own internal systems that maintain White supremacy (Moon & Sandage, 2019). Furthermore, when issues of racism are discussed at work or when diversity and inclusion initiatives are implemented, organizations should take care to ensure that unnecessary burdens are not placed on employees of color to take on additional responsibilities or to educate their White peers. Organizations should invest in outside consultation when leaders do not have the expertise necessary to conduct internal policy investigations or implement anti-racism initiatives (Moon & Sandage, 2019). An organization generally would not implement new financial procedures without the proper training and expertise, and therefore should utilize the same care in creating anti-racism initiatives.

While organizations can cultivate anti-racist practices at work, career development professionals can also work towards integrating practices that will help them to better serve their clients of color. For example, when conducting intake assessments with clients of color, career practitioners should explore the psychosocial, psychological, personal, and systemic facets of race to better appreciate the meaning of race for a client. This will provide information on the individual's race-related worldview, how they cope with racism, the racism-related stressors present, and the extent to which an individual has internalized the racism they have experienced (Carter & Johnson, 2019). This assessment should then be integrated into the conceptualization of the client. Clinicians should acknowledge the reality of racial trauma and avoid devaluing the impact of racism on well-being (Carter & Johnson, 2019; Leary, 2012). In addition to personal stressors due to racial discrimination, career practitioners should also inquire about work-related racial discrimination experiences. As work plays a crucial role in the development and

maintenance of psychological health (Blustein, 2008), it is imperative to ask clients about both personal and work-related experiences.

Given the intense and pervasive impact of racism, we propose a new and more hopeful vision for career development. More research focused on the work experiences of people of color, including the design and evaluation of work interventions for people of color, would provide more insight into how the profession can tailor their response toward clients from communities of color (Flores et al., 2019). Additionally, research that explores the experiences of racism and other forms of oppression in the workplace and its negative impact on well-being could result in action that leads to change. Finally, this research can be used to advocate for policy change and political action that ameliorates the pernicious impact of systemic racism (Kendi, 2019).

Conclusion

Many visions of the future of work affirm the constancy of change as complex forces intersect to create unexpected transformations in the way in which people manage the fundamental human task of working. Our vision for the future of work has centered around the long-standing plague of racism, which has affected the workplace in so many complex and pervasive ways. This article has sought to identify some of the important challenges that have plagued people of color in the workplace. We also have identified opportunities for change that we believe can help to create a positive vision for work and career practice. We hope that readers will join us in making a racially just and dignified vision of work a reality as we enter a time of both intense change and, optimally, much needed healing.

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CHAPTER 2: THE MANY WAYS OF KNOWING CAREER DEVELOPMENT: A GLOBAL PERSPECTIVE

By Brian Hutchison

Scope, salience, and inclusiveness are among the components of important contributions to scholarship designed to impact professional practice. In this introductory article, I will first consider one major contribution, an editorial, to prepare the reader before then introducing the themes and articles of this section. The editorial *Many Ways of Knowing* (Hartman, 1990) is not a career-focused article, yet it speaks deeply to the important underpinnings of global career development in the 21st century. I hope that this sets the stage for engaging reading and critical analysis of the contributions by our selected scholars.

Hartman's *Many Ways of Knowing*

Written as an editorial by the editor for the journal *Social Work* (Hartman, 1990), this two-page contribution prompts meaningful reflection and debate about truth, knowledge, research, and access, even today 30 years after its publication. Citing Karger (1983, p. 203–204), Hartman wrote, “Those who define the questions to be asked define the parameters of the answers...” (p. 203) in describing how “dialogue and debate are allowed within certain parameters, with the ultimate referee being the means of communication...” (p. 204) to describe the influence that journals have because of their editorial control of power, subjugation, and narratives. The starting point of reading a special section in a scholarly journal thus begins with the recognition of these three elements. Where are the centers of power in the selection and presentation of the material in the article? Who might be subjugated by the power exerted in this writing? Whose narratives are included and excluded from the telling in each article?

The crux of this perspective, then, is found within the resolution of these three questions. The boundaries each create, in an active manner, determining the truth claims found in our scholarship. Stated very pragmatically, “the norms of the journals can even shape the direction of inquiry” (Hartman, 1990, p. 3) and thus the direction of inquiry can shape what is called knowledge. Scholarship, both its creation and consumption, then becomes an act of morality because it is not only done in the pursuit of science but also in the pursuit of equity and justice.

In resolving these three questions, Hartman stated that “there are many truths and there are many ways of knowing” (1990, p. 3) as “there are indeed many ways of knowing and many kinds of knowers” (1990, p. 4). Since this section is a collection of scholars from around the globe, your job as the reader of the knowledge presented within this section is to consider the truths found within, the ways these truths have come to be known, and to what kind of knower they apply. Finally, it is equally important that you examine yourself as well, so that you can both question your assumptions and turn your own critical eye towards these data. This means not accepting all that is presented cleanly because “theories can both illuminate and obscure our vision” (Scott, 1989, p. 48). To consider these articles critically is of the utmost importance because this act of knowing constitutes a “moral intervention in the social life whose conditions of existence we seek to clarify” (Giddens, 1976, p. 8).

Introduction to the Section

Four articles representing career scholarship from four continents are presented. These narrate the current state of practice spanning fourteen countries using a variety of research methods. The mix of contributions will entice the reader to consider the intersections of culture and practice, methods, and context, as well as the importance of proximal versus distal analysis of career development interventions. In summary, this section will challenge the reader to consider their own practice from multiple perspectives within and outside their own cultural context.

The article *Career Development Theory A Solution for Urbanization: An Examination of Career Development Processes in Developing Countries through CIP Theory* by Brookens, Verma, and Orijoke takes the reader on a journey across the continent of Africa and beyond by presenting current structures, practices, and future considerations in Nigeria, India, and Uganda using cognitive information processing theory as an organizational schema. Fascinating concepts, such as national youth services programs, collectivistic development processes, and poverty eradication efforts, provide innovative and informative ideas for career practice at different scales.

Shifting focus to a single country, Dr. Timothy Hsi provides an in-depth historical analysis of the career development profession in Singapore in the article *A Model for Career Development Practice in Singapore*. Most fascinating to this reader, Hsi documents a mismatch between early career development approaches adopted from the West and the lived experience of workers in Singapore. Client demand for more job placement services led to a paradigm shift in practice, resulting in enhanced service to clients and nation-specific models for career practice. At the vanguard of current trends, Hsi adroitly maps current practice onto future needs for the 21st century worker. Much is to be learned in this journey, regardless of one's home country.

Canji and Carlson offer a dissertation case-study project as an exemplar of current practice in North America, both the United States and Canada, in *Themes Shaping Career Development Practice in North America: A Case Study*. This study answers the recent call to better align research methods with the questions asked, while combatting the bias towards linear modes of research when addressing non-linear phenomena (Balkin, 2020). Using a narrative career game for data collection, the study findings recommend using holistic, narrative, career practices to promote prosocial outcomes with clients.

In the fourth article, Brunal and Puertas offer a scoping review of career assessment practices across South and Central America in their work titled *Approaches to Career Assessment in Latin America*. The breadth of this review requires an organizational schema, and the authors chose to categorize the assessments as follows: Informational, Philosophical-Existential, Psychological, Pedagogical, Sociological, and Studies of Demand for Superior Education. These categorizations bring a rich, unique description of approaches spanning seven countries while offering the reader a new way of thinking about the types of career assessments we use in our own practices.

In conclusion, we have four dynamic and meaningful scholarly contributions in this section that requires the reader to consider them in the context of their scope, salience, and inclusiveness.

Applying Harmon to our reading of these works will not only make them more important in our own career practice, but also will make our own career practice more impactful for our clients.

Applying Hartman to Our Reading

In the opening sentence of this article, I suggested that scope, salience, and inclusiveness were apt targets for critical analysis of scholarship. Aligning these three concepts with the three questions posed by Hartman, I would say that scope and salience analysis will answer the question of power centeredness, while inclusiveness is largely determined by who is subjugated and who is liberated by asking whose story is told and whose is omitted. Before encouraging you to set forth and read the section, I would like to further frame the conversation by using these four targets in an attempt to capture the broad trends of global career development as I understand them today.

Scope

The extent to which a topic is representative of global populations is my working definition of scope. It is important to consider the context of the research as well as the intended applicability of the authors. The broader importance of scope is thoroughly delineated in my own article proposing an advocating workers-within-environment approach due to three critiques of extant career theory and research (Hutchison, 2015).

Hutchison (2015) employs critical theory methods to identify three broad thematic issues with current career theory and practice. These are:

1. Career work is WEIRD, or too heavily biased towards Western, Educated, Rich, and Democratic cultural norms. This bias unintentionally creates a standard or normative client to which career approaches are applied.
2. Career work is dehumanizing in that the current employer-focused stance of most career scholarship creates a distortion “of the vocation of becoming more fully human” (Freire, 2018, p.44). Two examples of this distortion, or attributing problems of practice to the client instead of the employer, are the ubiquitous terms work-life balance and self-care. Why is the onus of responsibility for living a good life disproportionately put on workers/clients and not put on employers?
3. Career work is colonizing in that it perpetuates the “Eurocentric paradigm of modernity” (Goodman & Gorski, 2014, p.4) at the expense of those who are others within this paradigm. Ask yourself why multicultural career-fair programs are all too often focused on “teaching” persons of color to dress, eat, and speak in the dominant normative way versus companies attending to learn to create more inclusive work environments?

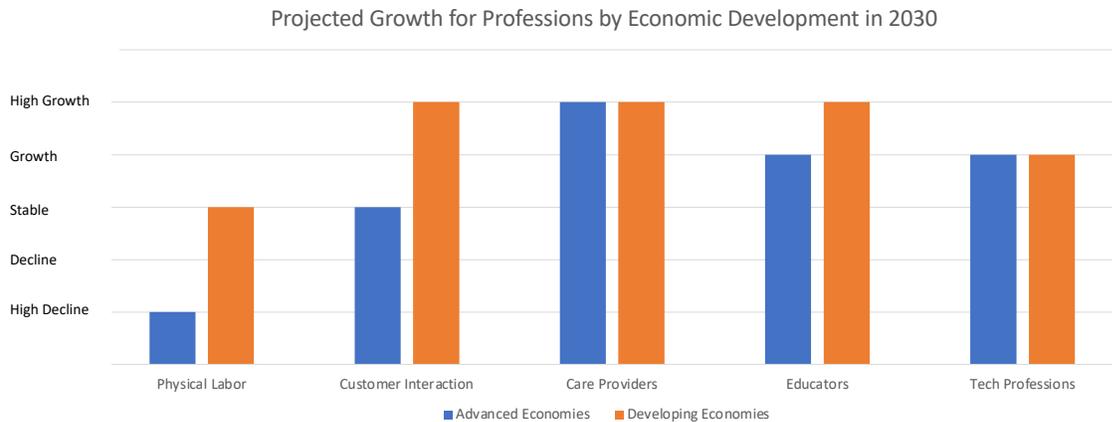
These critiques are not without controversy, but they do pose new problems to consider in the way we conduct career practice, research, and scholarship. While this section is a wholehearted attempt to broaden the scope of scholarship, we can only reach our highest ideals as a profession if we continue to pose the questions about scope while reading the offerings within.

Saliency

The current landscape of global career-development work does demand attunement to certain factors across all countries and populations. The “fourth industrial revolution” has been coined as the name of the current historical period as it impacts work. This period is described as a disruption of work because of modern “smart” technologies, such as artificial intelligences, biotechnology integration, the Internet of Things, nanotechnology, quantum computer, and more (National Careers Week, 2020). The true implications of these technological advancements remain unknown, but there is broad consensus today that the global discourse about the current period in work history is unsettling for workers at best and traumatizing at its worst (Bluestein, 2019).

Saliency, then, is the quality of importance this type of information has for different people in their own context. Fourth-industrial-revolution impacts are a perfect concept for thinking about saliency because different factors will impact economies differently. Let us, for example, take the National Careers Week report (2020) that organized projections in an attempt to predict the impact across countries with advanced economies and developing economies leading into the year 2030. Below is a table identifying some of the differences we might expect from jobs in 2030.

Figure 1.1: Projected Growth for Professions in 2030 (National Career Week, 2020)



Reviewing the data in Figure 1.1, it becomes clear that the context of economic development is important in understanding the saliency of technology change for different workers. This suggests that one aspect of critical analysis of scholarship requires the reader to identify the economic conditions of each country as it is presented. This is one of myriad types of context that may matter when determining saliency. There is a shared responsibility between the authors and the readers of career research to strive for this level of understanding so that aspects of saliency can be considered.

Inclusiveness

Asking the question, “Who was not included in any article and what are the costs, both penalties and opportunity costs, of this exclusion?” is the core aspect of critically analyzing inclusiveness. Workers-within-environment theory,

operates from the philosophical position that each human is always experiencing others, broadly defined, and is experienced by others. Within these shared experiences between self and others, the self is reliant upon one’s adaptive wits to respond to social experiences. (Lemberger, 2010, p. 133)

This approach asks us to constantly put ourselves in the role of analyst of our position. Are we within the group being referenced or outside it? The technical term for this is “alterity,” and it is more easily defined as *otherness*. As a reader of scholarship, this begs the questions:

- Are the subjects (e.g., clients) that any article affects more or less included than the dominant norm (WEIRD clients)?
- Are the subjects more or less like me?

It is the answer to these two questions that make us critical consumers of scholarship and information. It is how we incorporate scholarship into our career practice that determines whether or not we are employing our own critical consciousness and fostering it in clients as acts of advocacy. I will again reference my (Hutchison, 2015) article, where I cite McLaren’s (1999) framework for using problem-posing as a method in career-services practice. We might ask the same sorts of questions (as noted in brackets below) as we evaluate the inclusiveness of the articles in this section:

1. Approach client acts of knowing as being grounded in individual experiences and contexts. [How are the research methods a fit for the cultural values of the subjects?]
2. Conceptualize the historical/cultural world of the client as a transformable reality shaped by individual and collective perceptions. [Are the authors from the culture of the subjects? If not, do they do enough to describe their positionality and that of their subjects?]
3. Help the client make connections between his or her own conditions and the socially constructed conditions comprised of the realities of others. [Are the lived conditions of the subjects described in the context of broader social and economic concerns about work?]
4. Encourage clients to consider how they can shape the collective reality through individual acts of knowing, thus creating a new collectively created reality. [Are there implications for practice that benefit the subjects as clients?]
5. Help the client develop personal agency skills to impact the environment through his or her own acts of knowing. [Are the implications for practice ones that empower clients to advocate on their own behalf?]

-
6. Collaborate with the client to identify the myths propagated by the dominant social discourse so that the cycle of enslavement or oppression can be interrupted and eventually broken. (McLaren, 1999, p. 51)

Conclusion

Consuming scholarship can be an act of social justice advocacy. Offering globally focused scholarship, as we have done in this issue, is a first step towards expanding the stories or scope of career development practice within the academic literature. But it is only a first step. Social justice and inclusive praxis, or accepted practice as distinguished from theory, is the third step in using career-development practice to provide access and equity to all clients. It is the step between these two, that second step, that falls upon your shoulders as the reader of career scholarship. It is your care and concern to learn to read critically, to ask questions of scope, salience, and inclusiveness, and to do the difficult work of adapting your practice within the boundaries of your own critical thinking that will make clients' lives better.

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CHAPTER 3: CAREER DEVELOPMENT THEORY A SOLUTION FOR URBANIZATION: AN EXAMINATION OF CAREER DEVELOPMENT PROCESSES IN DEVELOPING COUNTRIES THROUGH CIP THEORY

By Qualandria Brookens, Khyati Verma, and Obianuju Orjioko

Introduction

Urbanization is on the rise in our world. More than half of the world's population resides in urban areas (United Nations, 2019), and this percentage will steadily increase until 2050. Lower-income and lower-middle-income countries are experiencing this rapid change more than higher income countries (United Nations, 2019). For the most part, urbanization positively impacts countries' economies; for example, urbanization reduces poverty and increases human development. As a result, lower-income and lower-middle-income countries' governments seek avenues for sustainable development of urban areas. According to United Nations (2019), countries are likely to reap the benefits of urbanization through provision of services such as education and employment. Unfortunately, many of these countries, such as India, Nigeria, and Uganda, arguably, lack sufficient career development processes that may aid in their economic development. These countries will greatly benefit from a career development theory that supports their country's values (Nsubuga & Ivins, 2020).

Cognitive Information Process Theory

Cognitive information processing (CIP) theory is a career development approach that is applicable to countries around the world. To date, CIP theory has been successfully implemented in countries such as Australia, Canada, and Philippines. CIP theory consist of the CIP pyramid, a four-part hierarchical process for effective career decision-making. The foundational components of the CIP pyramid are self-knowledge (SK) (e.g., values, interest, skills, mental health) and option knowledge (OK) (e.g., career, training, and educational options) (Sampson, 2017). Above the foundational components is decision-making (e.g., individual's career decision-making process). The decision-making component includes the Communication Analysis Synthesis Valuing and Execution (CASVE) cycle, a five-part decision-making process that emphasizes communicating, analyzing, synthesizing, valuing, and executing (Sampson, 2017). The top of CIP pyramid is metacognition (e.g., an individual's perception of navigating the career decision-making process). In the next sections, we will explore the current development processes, or the lack thereof, of low-income and lower-middle-income countries—Nigeria, India, and Uganda—and suggest future recommendations based on CIP theory.

Nigeria

The structure of career development in Nigeria can be best revealed through the National Youth Service Corps program (NYSC), a program initiated by the Nigerian government in 1973. According to research, the purpose of the regimen is to educate Nigerian youth regarding social

responsibility and to emphasize the brotherhood of all Nigerians, regardless of cultural or social background. The NYSC enrolls more than 250,000 university graduates a year (World Bank, 2019). To partake in the one-year program, students must apply after their college graduation and pay a fee; applicant requirements include meeting an age prerequisite, earning a university degree, and citizenship. Upon acceptance into the program, students are assigned to a company and are paid a minimum-wage salary for the duration of a year.

Employment in Nigeria largely depends on the NYSC because most private and public institutions refuse to hire college graduates who have not completed the program. Research suggests the NYSC is one of the most influential job-placement programs for college graduates in Nigeria. For the typical college graduate, the NYSC placement process commences once the student graduates from college. An application form is filled out with information such as field of work (e.g., medicine, law, education, engineering) for company placement purposes. After acceptance into the youth service program, work begins for the duration of a year. After working with a company for a year, the youth service corps member may receive a job offer. The service member has the option to accept or decline the offer. Seemingly, this is a functioning placement process, but under CIP theory, graduates have not adequately engaged in the career decision-making process, bypassing several components.

Self-Knowledge in Nigeria

Nigerian college graduates have the opportunity to explore the SK foundational component of CIP theory. During the first three weeks of the NYSC program, graduates explore their interests through diverse events, opportunities with volunteering, and community outreach. Graduates also network with corps members from other parts of the country. In this way, the NYSC program allows students to develop a sense of self and skills, and to explore career goals through the program's event-planning and networking efforts. A concept of self-awareness is developed, which allows students to utilize a mindful approach when thinking about their career path.

Option Knowledge in Nigeria

The OK component of CIP theory does not exist within the framework of the NYSC program. Nigerian graduates do not have employer choice. Prior to employment placement, graduates do not interview with the company or are not privy to knowledge of the employer. The NYSC collaborates with graduates minimally on career exploration process. Based on CIP, the NYSC program has an opportunity to create better placement techniques that will allow graduates to increase OK of employer information, organizational missions, and company values.

The NYSC program does incorporate the decision-making component of the CIP, although not comprehensively. Graduates evaluate their career decision through employment offers. Graduates can determine if the company offering the job aligns with their career and with their social and financial aspirations. This step in the NYSC program adequately allows for fair decision-making.

Executive Processing in Nigeria

Unfortunately, the NYSC program limits corps members in executive processing. Several aspects of the career decision-making process, such as job location, length of service, and compulsory participation in the program, are examples of the cognitive hindrances.

As a result of the NYSC program not effectively engaging in the career development process, the NYSC program has been met with much criticism about whether it is beneficial for Nigerian college graduates. For example, unemployment rates for college graduates are still high even after participation in the NYSC because students often complete the program without job offers. According to the Nigeria National Bureau of Statistics (2018), the unemployment rate for young people (15 to 35 years) in Q3 of 2018 was 29.7%. Unfortunately, this was an increase from 13.7% in 2015. This highlights the need for successful implementation of career development theory and economic infrastructure that supports the increasing rate of college graduation.

Future Consideration

There are limited existing studies on the NYSC program and its career placement process. Research recommendations include better data collection and the assessment of collected data primarily focused on whether the NYSC program is assisting or hindering students in the job acquisition process. Further, the influence of the NYSC program in the student's knowledge of self, knowledge of their options, and knowledge of the decision-making process needs to be explored. Though functional, the NYSC can be improved by equipping Nigerian college graduates to be more autonomous in the career decision making process by (1) providing more options such as employment and location preference in the placement process and (2) abandoning the mandatory year of service. In conclusion, NYSC should consider eliminating fees associated with admission into the program since Nigeria is a lower-middle-income country.

India

A lot of differing views from Indian researchers rests on the premise that a significant number of career-related theories are structured according to Western and industrialized norms that do not take into consideration cultural differences and societal structure based on interdependence (Sinha, 1979), which is not the case for CIP theory. The CIP is one of few theories that honors the collectivistic career development process among Indians, which is highly determined by the values and beliefs held by the community (Arulmani et al., 2003)

Self-Knowledge in India

Career development in Indians is strongly influenced by their habitual ways of thinking, which includes attitudes, opinions, and notions often coming together to build mindsets and beliefs that underlie the idea of an ideal career (Arulmani et al., 2003). Some of these beliefs become embedded in a way that they become unquestioned and self-evident truths (Krumboltz, 1994). They are not necessarily grounded in reason or rationale, but they continue to influence career decisions (Arluman et al., 2003).

Option Knowledge in India

Field observations of Indian middle and high schools can attest that OK is extremely limited. Research suggests that career preferences for middle and high school students are restricted to only 3 to 4 career choices that are considered to be “good,” respectable, and prestigious (Arulmani et al., 2003). One’s choice is seen as a collective experience that reflects on the family, as well as on community members (Juntunen et al., 2001).

In addition, OK highly correlates to society hierarchy. Hence, middle and high school students of low socioeconomic status (SES) automatically aspire to careers that are considered to be of a lower prestige (Jhaj & Grewal, 1976), which reinforces their belief that they should not, or do not need to, pursue higher education (Arulmani et al., 2001). As for university students from low SES, Murry and Pujar (2017) explored career decision-making difficulties faced by undergraduate students from a small town and found that low SES negatively influenced career decision-making. Low SES is linked to student low self-worth and increased drop-out rates, (Ojha, 1996).

Decision-Making and Executive Functioning in India

As aforementioned, career decision-making in India is rooted in collectivism. Parent employment, or lack thereof, largely influences the career decision-making process. Priority on career preparation is indicative of the parents’ employment status. Students are more likely to hold negative beliefs about career preparation if parents are illiterate and unemployed or underemployed because the students intend to start working as soon as possible to financially support their families in any possible way (Arulmani et al., 2001).

Future Consideration

Many studies have been done by researchers in India and abroad that focus on the career choices made by Indian adolescents and young adults. Due to the collectivistic nature of Indian society, social hierarchy based on occupation, and the intense focus on prestige and respect, there is a need to explore self-perception about interests and different career options that influence career development in Indian adolescents and young adults. This includes their knowledge about their own interests that will aid to their self-development, career options available to them based on those interests, challenges they are likely to face in the process of choosing those options, and steps that can be taken to overcome those challenges. In addition to that, there is also a need to investigate resources and people that help them make an informed decision about those options. Lastly, their own thoughts and reflections about the decision they have made about their career needs to be examined.

Uganda

According to the United Nations (2019), Uganda is one of the least developed countries in the world. In recent years, Uganda have experienced a mass re-distribution of population from rural to urban areas. The leading cause of redistribution of population was economic reasons (Nsubuga & Ivins, 2020). “As a result, the government recognized a need to stimulate economic

conditions. Thus, in 1997, Uganda established the Government's Poverty Eradication Action Plan (PEAP) with the long-term objectives of reducing income poverty, improving human development, and increasing GDP growth" (Nsubuga & Ivins, 2020). Uganda's Ministry of Education was mandated to increase awareness for the need of career guidance services, to conduct research on career guidance, to strengthen career explorations and monitor their implementation. Makerere University, the largest university in East Africa, is leading the charge with this mandate under the leadership of Henry Nsubuga.

Self-Knowledge at Makerere University

Makerere University is successfully implementing CIP theory, although with limitations. The students at Makerere University are seldom familiar with the terminology of SK. Students are often unaware of their values and skill sets. Makerere University utilizes paper format for following SIGI3 and Holland theory to gauge students' work-related values and interests. In Uganda, work-related interest is a relatively new construct that poses specific challenges to the career development process. Makerere University devised interventions to fill in the gap. Developing other strategies to assist with increasing SK is of utmost importance.

Option Knowledge at Makerere University

In Uganda, the Ministry of Education Sports Guidance and Counselling Handbook is one of the few resources that students can access to increase OK. The handbook, however, is not consistent with Uganda's current job market. Due to the lack of information, students tend to commit to careers that they have little to no information regarding. Makerere University attempts to change that narrative through providing access to American workforce databases such as O*Net, the Occupational Outlook Handbook, and the Career Decision Workbook. Unfortunately, this points to the lack of Uganda workforce databases. Students' career research is filled with faulty hyperlinks and outdated and inaccurate information.

Decision-Making at Makerere University

Makerere University students' career decision-making is based on parents, peers, and significant others. Makerere University students are less autonomous than western peers. The information given by parents, peers, and significant others may be limited, bias, and inaccurate. That is mostly the result of parents, peers, and significant others having the same access to outdated and inaccurate workforce information. Parents are aware of their limited information as it relates to the workforce and are not hesitant to re-direct their children to appropriate information once known.

Metacognition at Makerere University

Students tend to possess beliefs that serve as challenges to the career development process. For example, students demonstrate nepotism and a fatalistic perspective. These perspectives stifle students' sense of self-agency. Students are indecisive due to fear of selecting a career that they're uninterested in and are unable to select differently. Additionally, traditional women's roles are encouraged, contributing to challenges.

Future Direction at Makerere University

Makerere University is making great strides to increase effective career development services in Uganda. Future consideration should be given to a centralized location for Uganda-based workforce information; assessments that gauge values, skills, and interests; exposure to OK at an earlier age; and strategic collaboration between policy makers, to name a few.

Conclusion

In conclusion, urbanization is making a considerable impact on low and lower-middle income nations. An effective career development theory may be the solution for sustainable urbanization. As aforementioned, some developing countries such as Uganda are actively seeking to create an effective career guidance structure that will benefit their economy. Career practitioners, it is time to take our expertise and apply to regions that need it the most.

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CHAPTER 4: A MODEL FOR CAREER DEVELOPMENT PRACTICE IN SINGAPORE

By Timothy Hsi

Introduction

Career development has grown substantially in Singapore over the past five years. As a new and emerging profession, the full range of roles and functions of career development practice are still largely underexplored and often misunderstood by employers and supervisors of career development practitioners. A scan of limited literature on career development in Singapore provides a casual observer the impression that career development is largely only about preparing and improving clients' employability skills and placing them in jobs (Asia Pacific Career Development Association, 2019; Employment and Employability Institute, n.d.).

The early generations of career practitioners in Singapore were trained using career curriculums modelled after the Facilitating Career Development training by the National Career Development Association and the Job and Career Transition Coach training by the Career Planning and Adult Development Network. Participants of these training programmes were equipped with various career exploratory frameworks, which included enabling clients to establish their career decision-making styles and career satisfaction through the exploration of their life roles, values expression, and self-concepts (Niles & Harris-Bowlsbey, 2002).

Interestingly, the training received by these first generations of career practitioners (who were mostly employed by public agencies) did not sync very well with the needs of clients visiting these publicly funded career centres. Clients visiting these centres were mostly unemployed and looking to career practitioners for job placements; hence, the nature of their career needs meant these clients were not prepared to undergo a series of meetings with a career practitioner to explore factors leading to career satisfaction. The mismatch of service and needs led to much dissatisfaction and frustration amongst clients and practitioners.

Eventually, a policy shift took place for public career centres to focus their energies to help clients secure jobs, which inevitably led to a perception amongst job seekers and career practitioners that career development is equated solely with the goal of increasing employment and job opportunities for individuals (Tan, 2017). The shift towards focusing on job placements is highly pragmatic in the face of increasing volatility of the markets due to unforeseen factors such as the continual US–China “trade war” (Barret, 2020) and the emergence of global pandemics (COVID-19), which on the face of it works well to protect the economy and shore up employment rates while ensuring as many people as possible are continually employed.

Though relevant, the narrow focus in career development activities around this key area does very little to encourage career practitioners to explore and expand their scope of practice. Without education and challenge, this continual narrow focus will continue to stymie the professional development efforts of career educators, researchers, and the work of the Career

Development Association of Singapore to grow the profession and building a business case for private practice to flourish.

The purpose of this article is to flesh out the range of career development activities that career practitioners in Singapore should be equipped to offer to broaden their scope of work, as well as to further initiate discussion and exploration of what constitutes career development in Singapore.

Career Development Practice

Before we discuss the types of roles and interventions provided by career practitioners, it is informative to explore the different terminologies used to describe career development.

Guichard (2001) used the term *career education*, while Plant (2003) used the term *Educational and Vocational Guidance*. Patton and McMahon (2002) used *career guidance*, while Watts and Fretwell (2004) used various terminologies (as reflected in the practice across UK) such as *career education and guidance* in schools and *career guidance* in general for those outside the educational system. Hoppin and Splete (2013) used the term *career development facilitation*, while several authors use the term *career counselling* (Walker et al., 2006; Mcillveen, 2015; Krumboltz, 1998; Savickas, 2011). Other terms, such as *career coaching* (Feldman, 2001; Tudor, 2018) and *career mentoring* (Van Vianen et al., 2018), have been used as well.

Due to the huge range of terms used and for the purpose of this article, I will be using the generic term *career development* as an umbrella term that seeks to represent the whole range of career models and practices across the different jurisdictions.

Apart from the different terminologies used, an analysis of the models of career development provision reveals a general preponderance of delivery in three key areas: career development in the educational sector (i.e., equipping students between high school and tertiary education with career awareness, knowledge, and skills), career development with adults on an individual basis, and career development for adults within organisational settings.

Career Development in Educational Settings

Though career development for individuals in the school setting is not focused so much on career decision making (compared to school leavers and adults in career transitions), the educational interventions and programmes during their formative years work really well to build strong foundations that shape their future career and life choices.

Literature and research from across the various career related journals have demonstrated the effectiveness of career development programmes in education (Oliver & Spokane 1988; Whiston et al, 1998; Choi et al, 2015; Cheung et al, 2019). For example, Hwang et al.'s (2018) studies found the levels of career maturity (operationalised as *self-awareness, education and work exploration, career plan*) were significantly higher for students in the experimental group who received career education programme compared to the control group, while Cheung et al. (2019)

found students' understanding of career development deepened following internships that were organised as part of the university's curriculum.

Across different countries, it was also observed that career development and guidance were successfully implemented within the school system. In the UK, the bulk of career development and guidance provided through the school system comprises the range of interventions as follows (National Careers Service UK, n.d.):

- face-to-face guidance in a career centre and guidance over the phone
- redundancy support
- training fund application
- apprenticeship advice
- online career assessment tools and resources
- apprenticeship
- help with resume writing, job applications and interviews
- career events

Similarly, in the US, Dykeman et al. (2001) categorised career development practice in schools into four categories: work-based interventions, advising/counselling interventions, introductory interventions, and curriculum-based interventions. The specific approaches of the four categories are detailed in the table below.

Table 1: Career development interventions in US secondary schools (Dykeman et. Al., 2001)

Work-based interventions	Advising interventions	Introductory interventions	Curriculum-based interventions
<ul style="list-style-type: none"> • Cooperative Education • Internship • Job shadowing • Job coaching • Job placement • Mentorship programs • Service Learning/ Volunteer Programs • Work-based Learning Project • Work Study • Youth Apprenticeships 	<ul style="list-style-type: none"> • Academic Planning Counselling • Career focused parent/student conference • Career peer advising/tutoring • Career Map • Career Maturity assessment • Career Counselling • Career interest Assessment • Career Library /Resource centre • Career cluster/pathway/major • Career skills certificate • College Admissions Testing • Computer Assisted Career Guidance • Cooperative/Dual Enrollment • Information interviewing • Job Hunting Preparation • Recruiting • Referral to external programs 	<ul style="list-style-type: none"> • Career Day/Fair • Career Field Trip • Career Aptitude Test • Community members Teach in Classroom • Guidance Lessons on Personal Social Development • Guidance lessons on career development • Guidance lessons on academic planning 	<ul style="list-style-type: none"> • Career information infused into curriculum • Career/technical education course • Career skills infused into curriculum • Career academy • School based enterprise • Student Clubs/activities

Though the examination of the literature here is limited, it is obvious that career development in educational settings utilises the whole range of interventions and approaches. Career practitioners employed in educational settings have the opportunity to explore and implement the range of approaches that best suit the policies and goals of the prevailing environment.

Career Development for Adults in Transition

Adults undergoing career transitions would typically experience a period of change in their employment circumstance, as well as the adaptation to a new situation over time. Some of these transitions may be positive or negative, anticipated or unanticipated, and may impact the individual's relationships, assumptions, roles, and routines (Anderson et al, 2011). Adult career

transitions may include adults leaving school and are preparing for entrance to work, adults currently in employment but considering a shift in career direction, and adults who are not employed and are seeking to enter the labour market (Bobek et al., 2013).

With the advent of the fourth industrial revolution, increasing numbers of adult employees and workers will experience higher incidences of career transitions in their career journey due to the changing nature of work (Healy et al., 2017; Savickas, 2011). The transitions will likely take a combination of the three types of transitions observed earlier. It is in such an environment that career practitioners find themselves providing career interventions and services to these individuals.

To provide coverage for adults undergoing the different types of transitions, Brown et al. (2003) suggested five critical ingredients that career practitioners should include as part of their practice: workbook/written exercises, counsellor (career practitioner) and client dialogue, information about the world of work, modelling, and increasing environmental supports. Research indicates that practitioners utilising these ingredients have higher incidences of clients experiencing higher levels of success in managing transitions.

Apart from individual practitioner approaches, intervention types suggested by policy have also been observed in use with different countries. For example, career development services for adults in Canada include individual and group interventions and programs, such as career assessment, counselling, information and resource management, work development, and community capacity building (National Steering Committee, 2004, as cited in Lalande & Magnusson, 2007), while services in UK include informing, advising, counselling, assessing, enabling, advocating, and providing feedback (Development of Adult Continuing Education, 1986).

Career Development in Organisational Settings

Research shows that organisational career development practices are often practised in larger organisations, such as multi-national companies, or larger organisations with significant budget for talent retention and development (Dreher & Dougherty, 1997; Maurer et al, 2003; OECD, 2004, Watts & Kidd, 2000). Career coaching is increasingly being advocated within organisations and workplaces, especially in human resources, as it encourages employee engagement and retention and prevents unnecessary job turnover (McDermott & Neault, 2011). A popular term increasingly being used by organisations is “career management.” This arose due to the changing nature of the workplace, where employees are now expected to think and act for themselves when planning their career futures (Nathan & Hill, 2006).

Based on the literature, career coaching in organisational settings tends to revolve around three main areas: improving staff performances and capability building; grooming potential employees for advancement within the organisation (talent retention); and enabling executives and senior management to adjust and enhance their capability in order to maintain competitive advantages (Goldsmith & Lyons, 2011; Tyler, 1997; Hirsh, 2002).

In organisational career coaching, King (2004) outlined the list of interventions and approaches that are usually provided to staff:

- career development workshops (for example, for those facing restructuring and possible job loss, as well as those considering career or job change)
- one-to-one coaching with an internal or external career coach
- mentoring
- access to internal job opportunities
- career and self-analysis tools
- succession planning
- outplacement support for employees leaving the organisation and wondering about their next steps

Based on Nathan and Hill's (2006) research, it was found that the list of interventions provided at the organisational level were usually fulfilled by internal consultants, such as a dedicated career services team, line managers across the organisation, human resources professionals (especially the learning and development professionals), and mentors. Outplacement and executive or performance coaches may be utilised where external resources are required.

Career Development in Singapore

As career development practice in Singapore is fairly new, with limited literature and history to guide the direction of the profession, many practitioners take their cue from the client's demand as well as the prevailing policy adopted by the agencies they work for. The lack of clarity around what practitioners can do, versus what is required of them, has also been exacerbated by the public's lack of awareness of what career development is about. This development is not unlike how the counselling profession experienced their early development in Singapore, with multiple perceptions ascribed to the profession by different stakeholders with different expectations (Low, 2015).

In part due to the negative impact of COVID-19 on the economic situation, it is only logical and pragmatic that practitioners find themselves focusing their energies mostly on helping their clients look for and get jobs as one of their main priorities. However, it is important that, moving forward as the country climbs out of the pandemic and returns to normalcy post-COVID-19, career development practitioners begin to advocate for their own profession by engaging their agency leaders and clients to broaden the range of interventions beyond just job placements. As such, the following section of this paper will propose a model for practitioners to consider as the base for their professional development and growth in terms of intervention.

A Model of Career Development Practice for Singapore

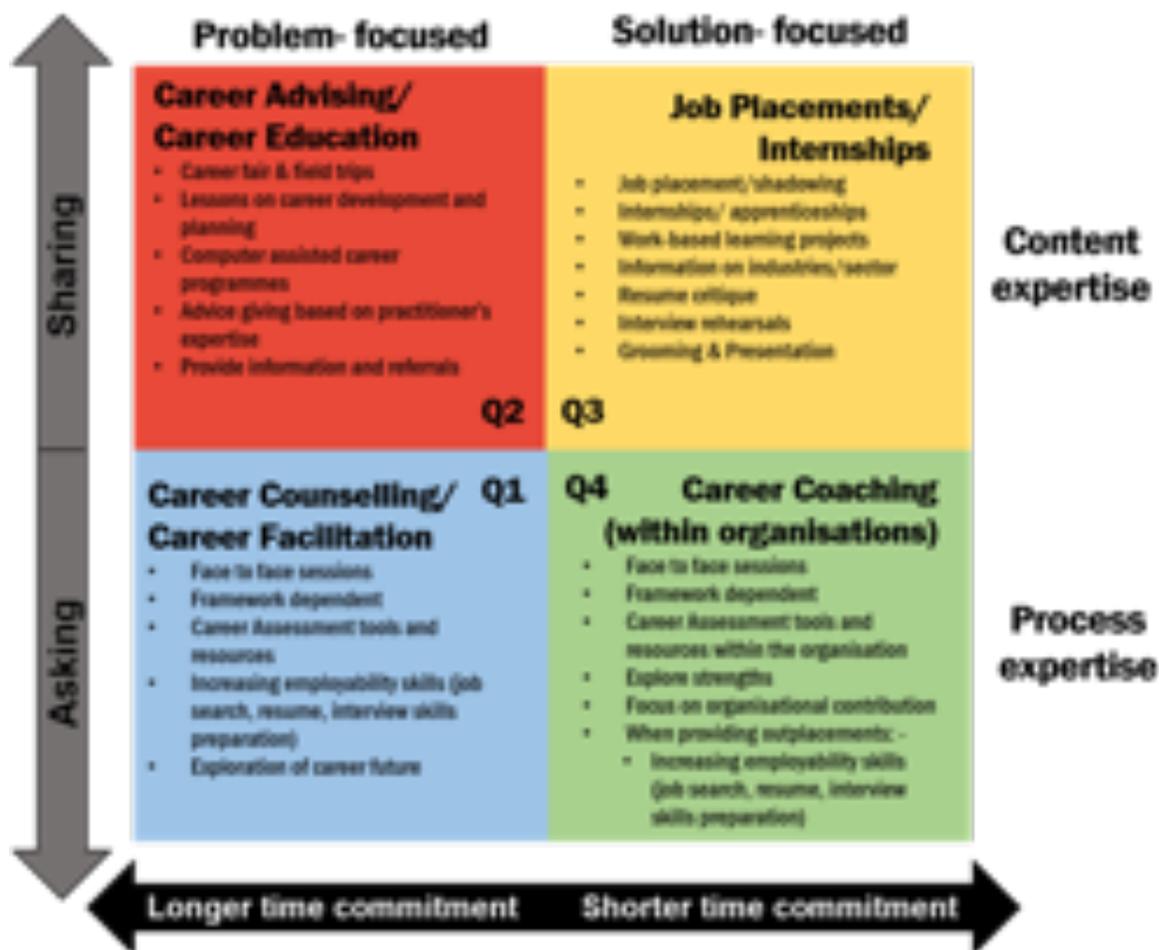
To kickstart discussions among career practitioners in Singapore, a proposed model of the practice focus that career development practitioners should consider when working to meet the various needs of clients is presented below.

Theoretical Rationale

In the model above, four constructs have been integrated to provide the career practitioner with a macro perspective and understanding of the areas of practice they could provide, depending on the needs of the client.

Communication Orientation

Schein (2013) introduced the concept of humble inquiry, which is defined as “the fine art of drawing someone out, of asking questions to which you do not know the answer, of building a relationship based on curiosity and interest in the other person” (p. 2). Schein distinguishes the differences between telling and asking. Telling is the act of providing information or



advising someone to do something, while asking (of questions) seeks to understand more about the other person within the context of the conversation. Though Schein alludes to the need for practitioners to ask more than tell, in the context of this model both telling and asking have their place because of the context and the needs of the client. For the purpose of the model, “telling” is replaced by the term “sharing.”

Time Frame of Sessions

In this construct, practitioners are made aware of the context of the client's needs. The amount of time required by different career practice interventions varies according to the needs presented by the client. Some interventions (e.g., job placement) may require only one 60-minute session with the client, while other interventions (e.g., career exploration) may require between three to six sessions, depending on the framework utilised by the career practitioner and the depth of inquiry the client wants.

Problem versus Solution Focused

Feldman (2001) suggested that career coaching is very different in context compared to career counselling. Coaching is more narrowly focused, where the target of coaching focuses on the client's specific strengths and weaknesses *in their current jobs* and what they could work on to improve their performances in their roles. Counselling is seen as an intervention that enables clients to assess their strengths and weaknesses *as job candidates*.

Priest and Gass (1997) outlined the differences between problem-focused facilitation versus solution-focused facilitation. In problem-focused facilitation, the practitioner seeks to investigate who or what sustained the problem, when and where it occurred, and why it continues to be a problem. In this, practitioners work to enable clients to learn about their issues and work together to either eliminate these issues or learn to cope with them.

On the other hand, solution-focused practitioners strive to bring about resolution by enabling clients to identify, construct, and implement solutions to the problem. Practitioners focusing on this modality often focus on what clients want (solutions), rather than what they do not want (problems), look for currently workable solutions, and enable clients to utilise their strengths to creating new solutions through investigating exceptions.

Content versus Process Expertise

Schein (1978) was one of the early researchers in the field of organisational development to propose the concept of content methods versus process methods of consultation. Content consultation is provided by an individual with expertise in a particular field (perhaps by virtue of the years of experience in the field) that enables them to assess the problem, provide diagnosis, and suggest a cure, very much like a medical doctor (Rockwood, 1993). The client in this model passes their problem on to the consultant, who is viewed as the "expert," and who then provides the recommendation, which the client in turn chooses to accept or reject.

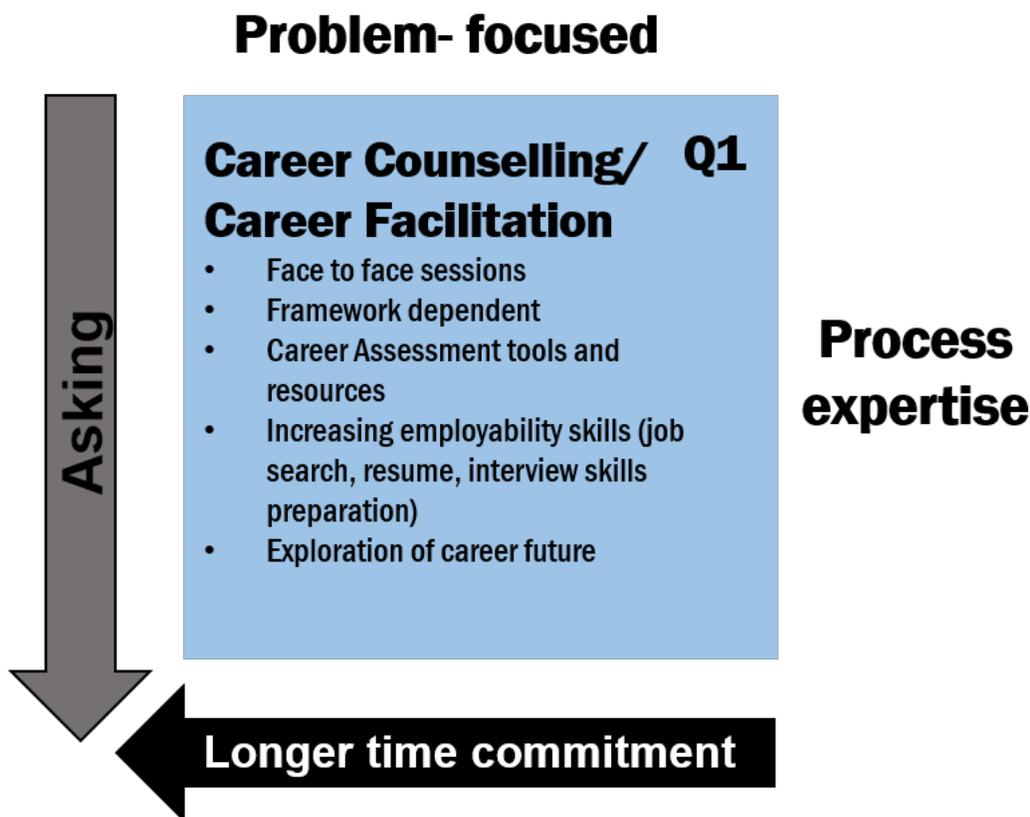
Process consultation, on the other hand, shifts the focus to how problems are resolved. This approach assumes collaboration between the client and the consultant throughout the process of diagnosis and generation of solutions for the presented problem. In process consultation, the client is viewed as the "expert" of their issues, while the consultant utilises theories and frameworks as part of the approach, and works closely with the client within their values and goals to resolve their dilemma. The process-related behaviours often emphasize skills that are thought to address rapport or the consultant–client relationship. The client in this model

continues to be in control of their issue and works with the consultant to arrive at a proposed solution (Schein, 1990).

Discussion

Having articulated the four theoretical constructs within the model, it is crucial that practitioners reading this paper be aware that the intent of the model is not to limit practitioners' to thinking about "which quadrant should I have my practice in?" but to expand their mindset to "when should I use each quadrant?" The choice depends largely on the needs of the client.

Quadrant 1 (Career Counselling and Career Facilitation)



Practitioners' Orientations

Practitioners operating out of this quadrant would be providing "career counselling" or "career facilitation" services. Due to the lack of standardisation of terminologies across the industry, I am proposing that career development practitioners with a qualification in counselling and who are registered as counsellors with the appropriate counselling association (e.g., education and career guidance counsellors) would operate in this quadrant as career counsellors, offering career counselling services and interventions. However, career development practitioners who do not have a counselling qualification but have career development qualifications would then be known as career practitioners, offering career guidance services and interventions to their clients.

Practitioners offering services in quadrant 1 have expertise knowledge around frameworks, skills, and a range of career issues (process expertise) that they rely on and utilise when providing career counselling or facilitation to their clients. The client is viewed as the expert in terms of their career issue, and the career practitioner provides a supportive two-way collaborative exchange that enables the client to explore, understand, and resolve their career issue through the utilising of frameworks and process knowledge as the foundation.

Practitioners adopt communication orientation of “asking” (Schein, 2013) when working with their clients. They seek to understand the client’s career problem using helping skills (Jordan & Marinaccio, 2020) and provide between two to eight sessions (depending on the client’s need) where they work together as collaborators to bring about clarity for client’s career future.

Practitioners’ Scope of Work

Practitioners in this quadrant have the knowledge and skills to provide face-to-face career development sessions (may be individual or group) where they leverage their knowledge of theories and frameworks to guide clients in career exploration discussions. The context of the sessions could be about increasing client’s employability skills through equipping them with knowledge about job search, resume writing, interview skills, and even networking preparations.

Other issues explored by practitioners in this quadrant include the impact of personal values on career direction or even work adjustments, and examination of the integration of work roles with their other life roles; or exploration of possible area of industry, sector, or job groups that the client may find interest in (Nathan & Hill, 2006). Practitioners also utilise various career assessment tools to enhance the exploratory sessions with their clients.

Practitioners operating out of this quadrant would likely be engaged as education and career guidance counsellors in schools and polytechnics, career coaches in higher education career centres, and private career counsellors or coaches (depending on whether they have counselling qualifications or not).

Clients

Clients who avail themselves of career counselling or facilitation services may be students from secondary to tertiary educational institutions. These clients being younger, they typically begin to explore their values, interests, and opportunities in preparation for their career future (Bardick et al., 2004). Another group of clients utilising career counselling or facilitation in this quadrant would be young adults transitioning from school to the workplace, or older adults transitioning between jobs. Similar to these younger clients, older clients require help to manage their own career paths and develop strategies, such as resilience and career adaptability, to better navigate the volatile labour markets due to disruptions arising from the fourth industrial revolution (Hearne, 2010; Savickas et al., 2009; Sultana, 2011).

Quadrant 2 (Career Advice and Career Education)



Practitioners' Orientations

Practitioners operating out of this quadrant would be providing “career advising” or “career education” services. Individuals operating in this quadrant usually have a main professional role (e.g., a line manager in an organisation or a teacher in a school) but at the same time, they have a secondary role that requires them to provide career advice or education to individuals they work with (e.g., employees in the department or students in their class). The practitioner adopts a “problem-focused” perspective, where attention is placed on the client’s presenting career issue and the practitioner seeks to provide advice and information that the client could consider to resolve the problem.

Practitioners offering services in quadrant 2 usually have expertise or deep domain knowledge (content expertise) that they rely on and utilise when providing career advice or education to their clients. For example, a senior engineer who manages a team of junior engineers utilises their lived experiences to provide career advice to the team members on how to progress in their jobs or even just to engage in a career conversation as part of their performance appraisal and career management process.

As individuals with expertise in their domain, the communication orientation usually adopted in this quadrant is that of “sharing.” Practitioners share their domain knowledge with their clients in

the attempt to equip them with information, or their past experiences in the same field so that clients are able to decide the steps of action for themselves to resolve the career problem faced.

Practitioners' Scope of Work

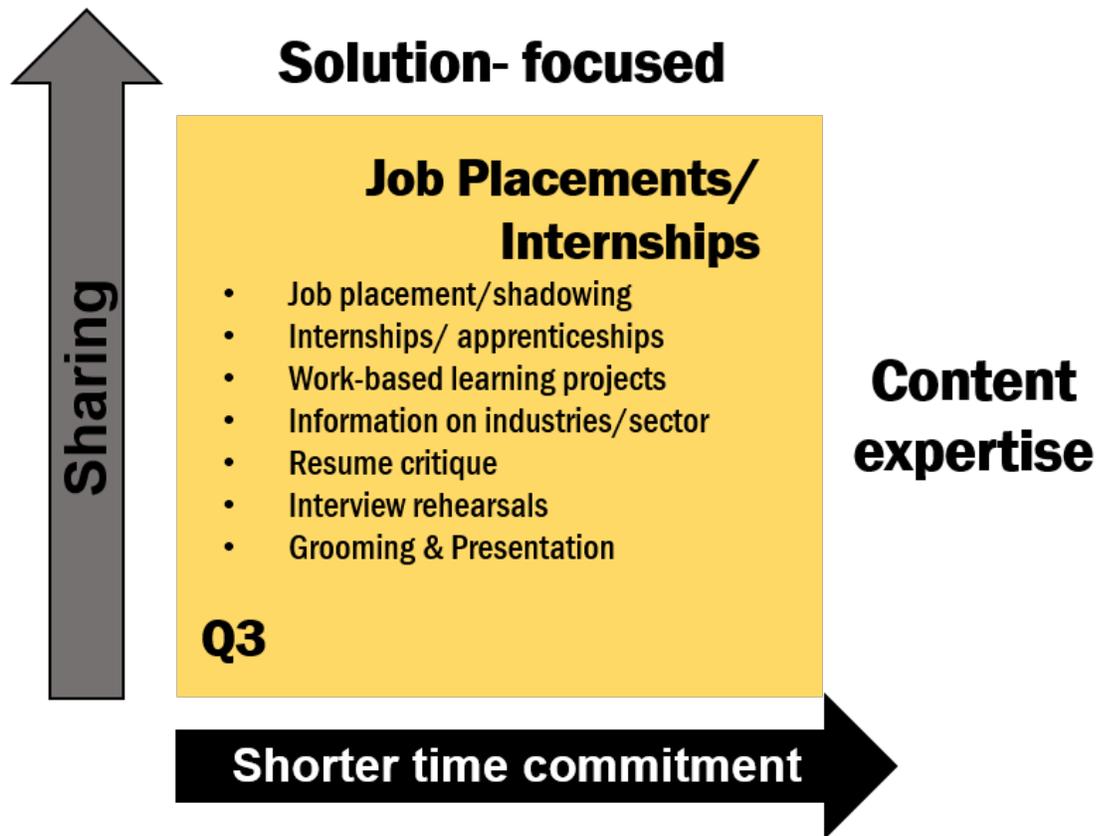
Practitioners operating out of this quadrant typically are individuals who leverage their career experiences to offer career advice or educate their clients. Career practitioners in this quadrant may offer career advice as a secondary function apart from their main job role. For example, a high school teacher's primary job role is to teach, but they have a secondary role as a career advisor to students, occasionally engaging them in conversations about their career future vis-à-vis their academic progression. Another example is a line manager in an organisation whose main job role is to accomplish department objectives but who has a secondary role as a career advisor.

Clients

Clients seeking career practitioners operating out of this quadrant usually are seeking career-related information. The information they are seeking may be non-personalised information regarding a particular topic or focus (for e.g., information on labour market information, or public funding resources such as SkillsFuture funding or union funding). Clients in this quadrant may also be students looking to understand how to connect their course of study to their future work (e.g., engineering students seeking advice from career practitioners who are former engineers).

Some clients in this category could also be individuals who have started work in a field and are looking for guidance from senior staff from within the same organisation to learn how to effectively navigate their job roles.

Quadrant 3 (Job Placements and Internships)



Practitioners' Orientations

In this quadrant, the main focus of the career development practitioner is to enable the client to be placed in a job. Individuals operating in this quadrant utilise their professional expertise and lived experience throughout their personal career journey to guide clients. In this quadrant, the practitioner adopts a “solution-focused” perspective, where attention is on enabling the client to obtain the job (the job in this case may be full-time, part-time or an intern role) within the shortest amount of time.

Practitioners operating in quadrant 3 usually have expertise, experience, and deep networks in an industry or sector that they rely on to provide the career service to their clients. As individuals with the expertise in the area of job placement, the communication orientation in this quadrant is that of “sharing,” where they provide directive guidance to clients to ensure they are well placed to obtain a job.

Practitioners' Scope of Work

Because of the career practitioner’s background in their own area of expertise and career experience, practitioners in this quadrant find they may specialise in placing clients into jobs from the same industry. Alternatively, career development practitioners operating in this quadrant may also provide generic job placements, especially if their agency focuses on job

placements as their main indicator of performance. Their focus is “providing a solution” for their clients, especially if their clients are unemployed and actively looking for jobs.

To prepare their clients well, practitioners will offer resume critique and job interview rehearsals, and may even share tips with their clients on grooming and presentation.

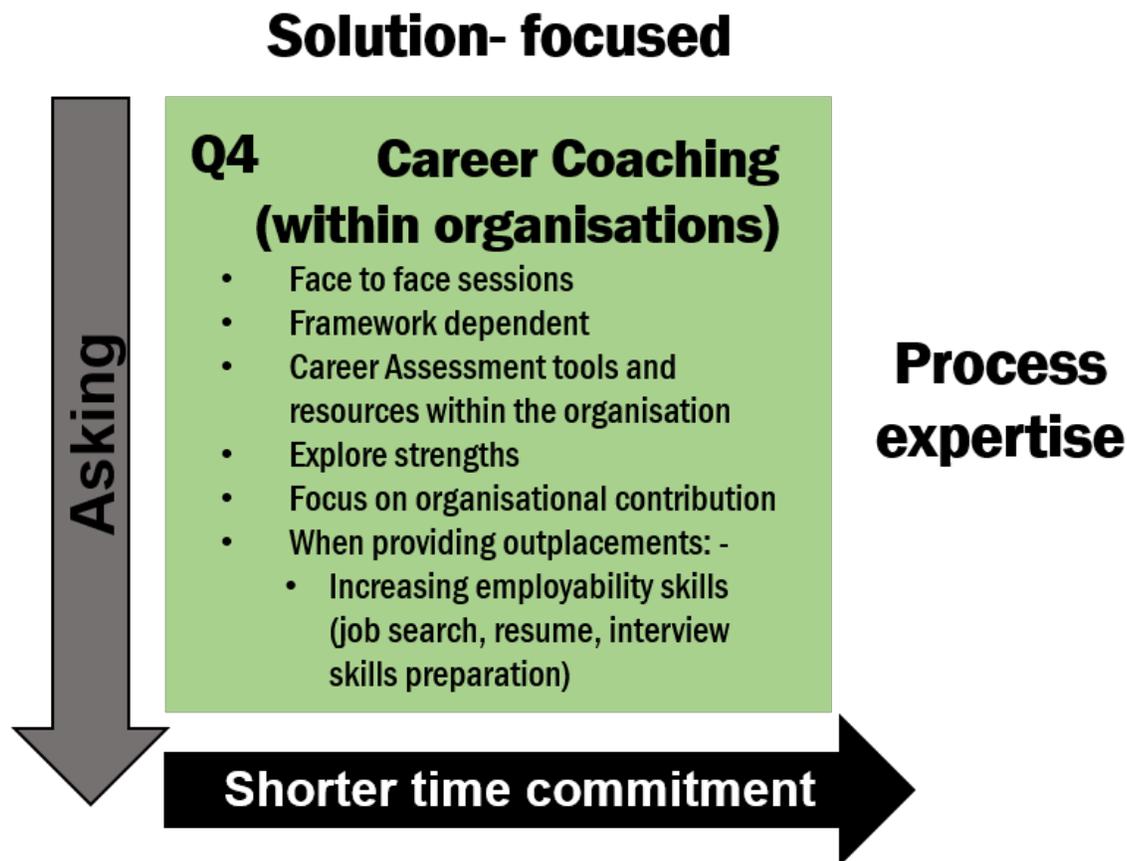
Practitioners operating out of this quadrant would likely be engaged as job coaches in public career centres or as career coaches in higher education career centres.

Clients

Clients seeking career practitioners operating in this quadrant usually are between jobs (especially with the impact of COVID-19 on jobs), individuals looking to re-enter the labour market, graduating students from tertiary educational institutions, or current students looking for internships as part of their learning progress.

Clients seeking career services in this quadrant are usually provided with a limited number of sessions, compared to clients in quadrant 1 or 2

Quadrant 4 (Career Coaching within Organisations)



Practitioners' Orientations

In this quadrant, the main focus of the career development practitioner is to guide the client to explore work-related concerns, which leads to professional development, and in turn positively impacts the organisation's goals and purposes. Similarly, to practitioners operating in quadrant 1, individuals in this quadrant utilise their expertise knowledge around frameworks, skills, and a range of career issues unique to clients in organisations (process expertise) when providing career coaching to their clients. The number of sessions provided in this quadrant is usually limited, compared to that provided in quadrants 1 and 2.

Similarly to quadrant 1, the client is viewed as the "expert" in terms of their career issue, and the career coach provides a supportive environment so that the client is able to explore, understand, and resolve their career issue within the organisation. In terms of the communication orientation, practitioners utilise "asking" (Schein, 2013) when working with their clients, and they utilise coaching skills (Passmore, 2020) to arrive at solutions that resolve the client's performance within the organisation.

Practitioners operating in this quadrant are usually employed by the organisation to act as "internal coaches" (Feldman, 2001). They may be dedicated human resources professionals with a career coaching role or managers trained with the skillsets to act as internal career coaches. The advantage of having internal coaches is that these coaches have detailed knowledge of the organisation culture and would provide much insight to their internal clients. However, there may be instances where external coaches are hired on a contractual basis to provide career coaching during a time of organisational transition, for example, during a time of downsizing, where employees are provided with outplacement services as part of the redundancy package.

Practitioners' Scope of Work

Because the career practitioner is employed by the organisation, their scope tends to be constrained by the goals and agenda of the organisation. Similarly, to practitioners in quadrant 2, individuals may be employed for this role on a full-time basis, or they may provide career coaching as a secondary role on top of their main job roles. For practitioners operating as internal coaches, apart from offering face-to-face consultations, they may organise career management workshops to enhance their employees' sense of engagement and provide support to retain employees for succession planning and future development.

If the career practitioner is an external coach, the scope of coaching would likely range from performance coaching to outplacement support. As part of the role of outplacement support, external career coaches may offer resume critique, and job interview rehearsals, and focus on enabling clients to achieve their goals.

Clients

Clients seeking career practitioners operating in this quadrant are employed by the same organisation as the practitioner and may be individuals seeking to improve their performance as an employee for the purpose of staff performance evaluations or even talent retention.

Alternatively, clients may be on the way out of the organisation because of redundancies arising from organisation restructure and may require the help of a career coach to prepare them for the transition.

Conclusions and Recommendations

The proposed model in this paper is by no means a finished product. As stated earlier, the purpose of this article is to act as a catalyst for further and deeper discussions within the profession about how career practitioners in Singapore would approach their work in the future. Further research is definitely needed to deepen our understanding of the roles that career practitioners play across the various quadrants, as well as to unearth areas that I have not considered when this model was created. As the model changes and receives updates due to contributions from different practitioners in the future, it is my hope that this will form a good foundation of knowledge to raise the professionalism of career development amongst practitioners and increase understanding of our roles across the different stakeholders in Singapore.

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CHAPTER 5: THEMES SHAPING CAREER DEVELOPMENT PRACTICE IN NORTH AMERICA: A CASE STUDY

By Martha Canji and Laurie Carlson

The Themes Shaping Practice

Literature suggests a collection of themes that drive career development practice in North America. These themes occur in two broad categories: times (situatedness) and approaches to intervention.

Situatedness

The first category, dominated by the fourth industrial revolution, has pushed us deeper into technology, digital platforms/services, automation, and innovation impacting how we relate, consume, and work (Schwab, 2015). COVID-19 accelerated the utilization of digital platforms for those able to work from home and many suggest this trend will continue (Silva, 2020; Lister, 2020). This applies to the delivery of career development services as well, with greater attention to resource acquisition and mental health coming into focus (Autin et al., 2020). Even before the pandemic, people expressed dissatisfaction with work and career for a range of reasons, including social problems, poverty, globalization (contraction currently evident), poor working conditions, low wages, and a lack of opportunities (Gordon & Schnall, 2009; Hodzic et al., 2015). This dissatisfaction reflects a substantial 70% of the American population (Feller & Chapman, 2018). These complex times will continue to impact the employment landscape and how we approach career development practice.

Approaches to Intervention

Theory and research determine practice (Sampson et al., 2014), which influences the aforementioned second broad category: approaches to intervention. Professionals in career development practice serve to promote the personal/social, learning, and career management needs of clients following the competencies established in the National Career Development Guidelines and in the Blueprint for LifeWork Designs framework. These guidelines function in conjunction with the National Career Development Association and the Canadian Standards & Guidelines for Career Development Practitioners, which describe practitioner competencies, education, skills, and ethical responsibilities.

Holistic, narrative, constructivist, and systems approaches shape career counseling. These approaches structure career development through stories, metaphors, context, and active agency to honor the whole person (Patton & McMahon, 2006, 2014). However, many approaches, interventions, and tools are operant in the career field and are instrumentally valuable depending on client circumstances and needs (Blustein, 2013; Savickas, 2013; Zikic & Hall, 2009). Busacca and Rehfuß (2017) provide the most current and robust understanding of postmodern career counseling practices. Their delineation emphasizes holistic, constructivist systems, and integrative approaches articulated by the themes of agency, context, non-statistical assessments,

shared collaboration, construction, meaning making, and stories. Specifically, narrative approaches to career development help clients communicate experience, craft a career identity, create meaning, and develop congruence (Savickas, 2013).

Chaos Career Theory and Happenstance Learning Theory

Chaos career theory helps conceptualize career as a complex and ongoing process influenced by a series of disruptions and transitions promoting openness, agency, and readiness to meet evolving demands and situations that occur over the life span (Pryor & Bright, 2011). This orientation encourages the processes of reorganization and adaptation (Pryor & Bright, 2011; Franklin, 2015). Happenstance learning theory echoes complexity, openness, and transitions, while emphasizing the management of “planned and unplanned” career opportunities (Krumboltz, 2009, p.135). Collectively, these approaches encourage individuals to cultivate flexibility and contextual meaning. Mark Franklin’s (2015) definition of career encapsulates this approach: “The full expression of who you are and how you want to be in the world, which keeps on expanding as it naturally goes through cycles of stability and change” (p. 451).

Positive Psychology

Positive psychology seeks to promote human flourishing in a variety of contexts including the world of work (Csikszentmihalyi, 2008; Seligman, 2013), contributing to holistic career development by emphasizing optimal functioning, strengths, agency, well-being, and adaptability. Positive psychology emphasizes well-being characterized by positive emotions, engagement, positive relationships, meaning, and accomplishment (PERMA). As such, well-being engenders numerous benefits, including higher levels of creativity, optimism, achievement, and a growth mindset (Jarden & Jarden, 2015; Seligman et al., 2009). Together, PERMA and strengths undergird integrative and holistic approaches to career development practice, and posit an antidote to job burnout and disengagement, possibly boosting hope and morale—indicators of job satisfaction (Adams et al., 2003; Feller & Chapman, 2018; Maslach et al., 2001; Seligman, 2013). In addition, diary, questionnaire, and measurement studies support positive correlations between strengths use and well-being, positive emotions, and worker engagement (Wood et al., 2011; van Woerkom et al., 2016).

Psychological Capital

Psychological capital (PsyCap), with its roots in positive psychology, positive organizational scholarship, and positive organizational behavior, seeks to develop the learnable elements of *hope*, *efficacy*, *resiliency*, and *optimism* to buoy internal resources that contribute to performance and success (Luthans et al., 2015). The constructs have demonstrated a high degree of validity and reliability and relate to higher levels of well-being and work satisfaction (Luthans et al., 2015). These state-like qualities, known as the higher order construct PsyCap, work synergistically to elevate adaptation and functioning (Luthans et al., 2015).

PsyCap *hope* is augmentable and composed of three critical components: agency, goal setting, and way-finding (Luthans et al., 2015). PsyCap *efficacy* is a person’s set of beliefs that converts energy and goals into action. PsyCap *resiliency* is key to helping people cope and respond

productively to career setbacks, side-steps, promotions, and looming uncertainty, enabling the capacity to bounce back and adapt from wanted or unwanted change (Luthans et al., 2015, p. 29). Lastly, PsyCap *optimism* advances a positive outlook in career development (Luthans et al., 2015). These constructs are associated with Bandura's (2001, 2006) functions of agency, which include intentionality, forethought, self-reactiveness, and self-reflection.

Together, these state-like qualities encourage adaptive functioning. In a study of 450 college students, self-efficacy was shown to boost confidence and decision-making in career development (Lent et al., 2017). In the current milieu, PsyCap will be a growing component of career development practice to encourage proactive career management and boost mental health. Together, positive psychology and psychological capital incorporate strengths utilization and contribute to greater work satisfaction, agentic expression, and life meaning (Clifton & Anderson, 2002; Seligman, 2013).

Agency

Agency is an underlying theme that guides intentionality and runs throughout many approaches to career development. Bandura (2006) divided agency into four properties:

- Intentionality comprises goals and actions (Bandura, 2006).
- Forethought represents potential and inspires “direction, coherence, and meaning” (Bandura, 2006, p. 165).
- Self-reactiveness is the process of self-regulation connecting thought, action, and motivation to purposeful ends (Bandura, 2006, p. 165).
- Self-reflectiveness is the ability to reflect on the effectiveness of actions and to make course corrections to reach desired outcomes (Bandura, 2006).

Career development operates within the construct of agency to express self-determination in the world of work (Bandura, 2006; Blustein, 2013), and to promote social justice and well-being (Brown & Lent 2016). However, it is important to note that agency may have limits, based on a variety of inequities and lack of opportunities that exist in the culture (Blustein, 2013). Therefore, “decent work” has emerged to articulate work's benefits independent of positionality to promote well-being (Duffy et al., 2016, p. 128) and life meaning (Blustein et al., 2016). The themes of agency, openness, context, efficacy, resiliency, well-being, and narrative construction drive theory and research that inform a fundamentally holistic and integrated approach to career development practice.

Study

This study examined the exclamatory life and career game *Who You Are Matters!* (WYAM). The board game experience allows participants to construct informative short stories and provide response stories of resonance and support that move life and career narratives forward (McMahon et al., 2004). Three questions were examined:

- How do participants experience the game?
- How do features of PsyCap and well-being manifest in the experience of game play?

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- What post-game-play actions do participants take?

Data collection included analytic notes, questionnaires, and player stories. Analysis involved structural narrative, interpretive/thematic, categorical, diagrammatic, and poetic techniques. Data analysis explored experiences, stories, and actions through the themes of well-being, psychological capital, agency, and transformational learning. Gratitude and broaden-and-build were also briefly examined as contributing factors that amplified player benefits.

The eight participants were from a large four-year university in the Rocky Mountain region. The participants were female, first-year and second-year, and/or first-generation students ranging between 18 and 23 years of age. Participants identified as American, Asian, Hispanic, White, and Caucasian, while two chose not to declare a cultural affiliation. For all components of the research study, the participants total time commitment was no longer than 2 hours and 45 minutes.

The principal researcher hosted three separate game sessions to manage the various activities of the study. In practice, multiple games can easily be facilitated simultaneously (Franklin et al., 2017–2018). Game play took place on campus in a large conference room, and all game sessions were recorded to collect and transcribe player stories and texts for analysis. Two questionnaires explored two categories of experience: game-play and post-game-play.

The first questionnaire (eight open ended questions), administered immediately following the conclusion of the game, focused on participant benefits, feelings, insights, state-like qualities, and reflections (Patton, 2002). All eight participants responded to the first questionnaire.

Participants completed the second questionnaire at two to three weeks post-game-play, with responses collected in *SurveyMonkey* using a matrix of five action categories:

- seeking information
- thinking and reflecting
- sparking meaningful conversations
- building relationships and making connections
- creating deeper engagement

Participants selected from a range of time horizons and 60 post-game-play actions, and checked all that applied, for example, “I have done this,” or “I plan on doing this between now and 3 months.” Six of the eight participants responded to the follow-up questionnaire.

Findings

The Learning Cycle of *Who You Are Matters!*

The integrated cycle of game play is a product of observation, analytic notes, and analysis of questionnaires, stories, and texts. The key features of game play are structure and context provided by WYAM, contributions and expressions of PERMA, and PsyCap (pre-game and during game), which in concert contributed to the six process-oriented themes of storytelling

described in the next section. The structure and context of game play, along with contributing elements of PERMA and PsyCap, provided rich information to the agent for processing and meaning-making. This processing occurs through the functions of agency as set forth by Bandura (2001).

Meaning-making appeared to be intensified by positive emotions associated with gratitude amplification and broaden-and-build theories. Lastly, actions or outcomes arose from transformational learning and/or an adoption or expansion of a growth mindset or HEROIC mindset characterized by “hope, self-efficacy, resilience, optimism, intentional exploration, clarity and curiosity” (Feller, 2017, paras. 2–8). Overall, game play situates players’ experiences, stories, and actions in a dynamic and comprehensive learning cycle. Due to the pandemic, social distancing, and the increasing move to remote work, *Conversations Matter*, a virtual experience, has been created that builds on the research and success of WYAM.

The Unfolding Process of Storytelling (Thematic Findings)

Broadly, themes helped to explore what, when, how, location, and purpose of happenings within stories. Six themes were constructed from the storied process findings. Themes were somewhat progressive and synergistic in manner, moving players toward career goal setting. The six themes were:

- constructing and co-constructing meaning and identity
- cultivating wherewithal
- experiencing community
- equipping
- generating ideas and possibilities
- disorienting awareness

Constructing and Co-Constructing Meaning and Identity

In total, 134 stories and 74 texts were analyzed for thematic frequency, which illuminated the centrality of *constructing and co-constructing meaning and identity* in stories that promote active engagement, ownership, and identity construction. Many of the lesser coded themes were also coded as expressions of *constructing and co-constructing meaning and identity* because of overlap in function appearing to inflate frequency related to *constructing and co-constructing meaning and identity*. Other themes were more distinct.

Although other themes were coded less frequently, contributions of each were significant in moving players toward relevant goal setting. For example, the theme *generating ideas and possibilities* typically occurred when the elements of game play converged, and players assigned possibilities because of game progression. These possibilities took on a more specific intent, evolving into inspired actions. Further, participants expressed the theme *disorienting awareness* infrequently, yet it seemed to accentuate and call attention to needs that pressed on identity.

The theme *constructing and co-constructing meaning and identity* was the most frequently occurring theme in game play, and it emerged 309 times. Meaning and identity are constructed

and co-constructed in social settings, interactions, and mental processes (Jacoby & Ochs, 1995), signifying units of importance related to identity expression and/or the functions of agency. In game play, stories derive meanings that, in effect, communicate identity (Johnstone, 2016). For example, participant 2 referred to reading a book as a life-changing experience by recapitulating salience, “that was one important moment.” She identified an important influence and the resultant impact or meaning. Most stories about relationships relayed mentors and teachers as influencers. Overall, others in players’ stories often acted as inspiration, a scaffold, or as a source of feedback contributing to the various aspects of *constructing and co-constructing meaning and identity*. Further, stories of strength contributed to the theme *constructing and co-constructing meaning and identity*, and the expression and development of PERMA.

Cultivating Wherewithal

The theme *cultivating wherewithal* incorporates the state-like expressions, or qualities of PsyCap and PERMA, that contribute to and/or inform the functions of agency. This theme occurred 188 times. Expressing emphasis and excitement was the most frequent manifestation of *cultivating wherewithal* across stories. To illustrate, “love” clearly expressed a positive emotion, and words such as “really cool” and “very” indicated emphasis, elaboration, or excitement.

Experiencing Community

The theme *experiencing community* serves as the experiential ground or field in which storytelling and significant learning take place. Although *experiencing community* occurred within structure and context throughout game play, it primarily lay within the intertextual experience of response stories. Experiencing community occurred 165 times. Game structure helps response-players to state what is valued in an original storyteller’s narrative by providing a sentence stem to complete. The stem is “I appreciate what you said because...”.

As a result, appreciation is clear, and other comments grow out of this guidance. Response stories typically progressed through lines of appreciation—extending, enhancing, and adding value to a person’s quality, identity, or original story. Participants demonstrated appreciation and resonance, revealing similarities between players. Resonance stories reflected similar experiences, emotions, life-space, values, and interests. In general, words and phrases such as “very important” elevated emotion and excitement about an original storyteller’s quality or interest, imbuing it with community significance related to transformational learning and the theme *constructing and co-constructing meaning and identity*. The game provides the social context for mattering through the giving and receiving of attention and appreciation in community (Savickas et al., 2009; Schlossberg, 1989; Seligman, 2013).

Equipping

The *equipping* theme represents personal qualities, strengths, desires, influencing others, roles, assets, and natural interests found in game play influencing life and career exploration. This theme was coded 100 times. Players clearly expressed these qualities, and by extension articulated that skill, knowledge, ability, or capacity are useful in a variety of settings. In tandem, players also developed the varied skills of life and career exploration and management such as

self-reflection, accessing resources, and goal setting. Others demonstrated active career management skills that emerge in the second half of the game reflecting active resource development, planning, networking, and goal setting skills. Setting specific goals contributes to transformative learning, and increases the motivation to act, reflecting self-awareness and life/career exploration and management skills.

Generating Ideas and Possibilities

The theme *generating ideas and possibilities* is a process based on progressive self-discovery and reflective insight that occurs throughout game play. This theme occurred at various stages of game play, but appeared most frequently in stories of possibilities, expanded possibilities, and inspired actions. It was coded 45 times. Some narratives represented more distal possibilities, and others represented more immediate and actionable ideas. These were inspired actions. Participants 1 and 4 represent this spectrum:

Participant 1: I choose starting a business...I want to be an optometrist... start my own optometry branch. That's a very far away goal.

Participant 4: I want to research...graduate school options...look at different schools around the country...and possibly talk to the career center...where I can go after my undergraduate degree.

Disorienting Awareness

The theme *disorienting awareness* is a process that occurs during game play when players experience a disruption to identity or story. The theme disorienting awareness provided insightful punctuation to player stories. It was coded 29 times. It manifested in game play as cognitive dissonance, conflicting priorities, or as new discoveries needing accommodation.

Agentic Findings

Players demonstrated interest, salience, and ownership of their narratives with declarations that asserted identity, meaning, and direction. Participant 6 reported faith as integral to her identity. Faith informed salience and values related to agency, which informed meaning, identity, and decision-making processes through self-reflection and forethought:

Participant 6: I would, say, my faith has really impacted who I am as a person...growing...through God teaching me things.

Participant 8 demonstrated current relevance, engagement, and positive emotions in her narrative about teaching others:

Participant 8: I said I love to share ideas and teach because it's really fun for me to...help someone else...understand, and...it kind of goes with...helping people...I like sharing knowledge if I have it.

Toward the end of the game, players outline their expanded possibility, receive supportive feedback, and conclude by developing an inspired action. Inspired actions are declarative statements (analyzed as texts) not necessarily stories per se, but a bridge to next steps, a vision for the future, and new stories to come. The researcher analyzed these statements according to the same themes as used for stories. Given statements are brief; the researcher examined statements as a whole and coded with multiple themes. The most reoccurring themes in inspired actions were *generating ideas* and *constructing and co-constructing meaning and identity*. Participants stated a specific action and designated a due date. Most participants designated their goal to be completed within one to three months. Goal articulation focuses goal directed behavior. These texts externalize and press on agency to weigh options, contemplate choices, and resolve ambivalence for change motivating forward movement (Bandura, 2006; Miller & Rollnick, 2013).

Game-Play Questionnaire

Supporting agency, transformational learning, and PsyCap were noted in comments from questionnaire 1. Participant statements demonstrated discovery, directionality, and confidence in the future.

Participant 3: The other players...really encouraged me to pursue my desires and I felt better prepared/informed...to take action.

Participant 5: I feel a shift in efficacy as a result of playing because I feel like I can actually discover and determine what, maybe, I can complete. I feel more motivated to take action, instead, of just being stressed and doubtful of my abilities. I felt it most when we were reviewing inspired actions.

Participant 6: I feel more solidified in my ability to act on my hopes/desires especially in regards to service.

Participant 8: I realized... some of my desires or short-term goals...and how...important [these are] to my life.

Further, in the evaluative responses from questionnaire 1, players used such words as “enjoyed” and “excited,” which indicated positive end states. Rare in this study, but significant, were player comments that demonstrated a reduction in negative emotions. For example, one participant commented in questionnaire 1 that she had been previously “very anxious,” another indicated that she “felt stress and fear” before game play. Both of these comments suggested a more positive emotional state after game play reflecting PERMA, PsyCap, or both. These emotions collapsed into two categories representing positive emotions (interest, hope, charity, joy, love, gratitude) and negative emotions (fear, alarm) necessary to learning, memory, creativity, and decision-making (Schmidt, 2017).

Post-Game-Play Questionnaire

Through questionnaire 2, players indicated a range of plentiful actions taken post-game-play.

The first category, *seeking information* actions, had many selections in the “I have done this” column showing significant early engagement. The most popular selections were “researched my expanded possibility and/or inspired action” and “looked into furthering my education related to my expanded possibility and/or inspired action.”

In the category of *thinking and reflecting* actions, responses included actions that engaged the imagination and captured ideas by thinking, drawing, or writing.

There were seven possible action items listed in the category of *sparking meaningful conversation* actions. These actions represented sharing with others and making intentions known.

Six possible action items represented the category of *building relationships and making connections*, and all six had an affirmative response at either “I have done this” or “I plan on doing this between now and 3 months.” These actions represented making a connection with someone in an area of interest, initiating a mentoring relationship, making an appointment with a professional (e.g., advisor, counselor, career coach), joining an association, and/or creating a LinkedIn account.

The category of *creating deeper engagement* actions held 28 possible action items for participants, the most out of the five action categories. The action items, primarily based on the game’s possibilities round, highlight clusters of possibilities related to an exploration theme.

In game play, players selected from their possibilities to develop their inspired action. Participants engaged in all categories of action, demonstrating curiosity, intentionality, and momentum indicating that WYAM supports clear and actionable goal setting.

Findings that Amplified Experience

Extended appreciation and positive energy or emotion amplifies game experience. Gratitude amplification and broaden-and-build represent this amplified experience. Toward the end of game play, participants shared summary feedback that demonstrated appreciation, connection, and good feelings. Participants valued the comfort and connection found within the group. Participant 5’s reflection captured growth related to the perception of being alone:

Participant 5: Sometimes it feels like everyone has everything figured out, and know(s) what they want to do. But...it’s not always like what it appears to be.

Players expressed how it felt to be supported and encouraged in game play. Participants generally expressed sentiments of connection, positive feelings, and motivation. Participant 8 reflected that support was motivating and inspiring:

Participant 8: It was great to hear the ideas, and it was also kind of inspiring.

Explicitly, “benefit exchange” (Watkins, 2014, p. 6) solidified and amplified the positive experience of game play promoting well-being. This amplification occurred across the themes of

constructing and co-constructing meaning and identity, cultivating wherewithal, and experiencing community.

Findings Related to PsyCap and PERMA

This researcher observed that PsyCap and PERMA function interactively because of adjacency in the field of experience. PERMA and PsyCap expressions emerged in multiple themes, but were often associated with the themes of *cultivating wherewithal, equipping, and constructing and co-constructing meaning and identity*. PERMA was stimulated and observed in game play through meaningful stories and community affirmation. The player comes to game play with attributes, experiences, prior learning, meanings, and stores of PERMA and PsyCap, contributing to game play. All PERMA elements appeared to relate significantly to time in the present through the formation of relationships during game play, to the past through the recall of stories, or to the future through planning and forecasting accomplishment.

In general, players used words such as “love,” “fun,” and “best” to emphasize the importance of a quality, which added to the expression and cultivation of PERMA by activating or drawing out positive emotions. Stories about strengths evoked the most positive emotions (PERMA element).

Synergistically, links between PERMA elements extended the importance of a quality. For example, words like “really value,” “try,” and “very” heighten the salience, while words of application and utility, such as “gotten me through a lot” and “do the best I can” demonstrated the extension, application, or significance of a quality. Participant 3 expressed a connection to something larger than self and emphasized the importance of a quality or story with the words “first” and “big asset,” linking implicit emotions and meaning in PERMA. Participant 4 linked educational engagement, positive emotions, and previous accomplishment, boosting PERMA well-being.

Positive relationships emerged with other players through testing, mirroring, acceptance, listening, resonance, and connection. These terms express the intertextual experience of sharing stories that reflect constructs embedded in social exchange and transformational learning (Jones et al., 2019; Nohl, 2015). This resonance arose through similar experiences, emotions, life-spaces, values, and interests. Relationships were further amplified by expressions of appreciation and gratitude (Watkins, 2014) or positive emotions that members offered. Evidence suggests interaction and links occur between positive emotions, positive relationships, engagement, and meaning in player interactions. In sum, analysis of player stories and comments indicated that structure and processes endow positive emotions, motivational energy, hope, and anxiety reduction, boosting PERMA.

Although each PsyCap construct is unique and independent, it is common to trigger more than one at a time. PsyCap happenings and features occurred at the intrapersonal and interpersonal levels, and structured processes gave rise to PsyCap expression and outcomes represented in the game’s organizing tools and products. Outcomes were retained and expressed through participant goals, inspired actions, and a clarification sketch.

For example, Participant 7 recounted an experience that challenged her to stretch out of her “comfort zone.” This story demonstrated past success affiliated with PsyCap efficacy, manifested through the intrapersonal level as an evaluative story demonstrating experience and competency, bolstering optimism. Through stories, players recall PsyCap experiences, conditioning them to access and generate PsyCap, thus fostering optimism and efficacy in both the present and the future. Participants reactivate pathways to success, which sparks hope and affirms resiliency.

In response stories, participants value players’ original stories to affirm a players’ strivings to engender efficacy and optimism. This is conveyed through the interpersonal domain and listed as affirmation that contributes to PsyCap development. Specific expressions relate to inspiration as a component of efficacy, and excitement to forecast optimism. Like-minded players affirm original storytellers, serving to influence or embolden the original storytellers, thereby igniting PsyCap and well-being that supplies energy for self-expression. These experiences become fuel for PsyCap (Luthans et al., 2015), well-being (Seligman, 2013), expression, and development. The response stories complement experience by affirming and mirroring. Constructs work together to bolster PsyCap (Dawkins et al., 2013; Luthans et al., 2007) and participants appeared to wrap sessions feeling energized.

Summary

WYAM connects people in community, generates positive emotions through affiliation, and affirms the value of players’ stories. Resonance provides opportunities for players to convey acceptance, worth, and dignity to others that influences PERMA and PsyCap generation. The game’s progressive structure elicits relevant self-reflection and insight. There is a density of meaning that occurs in narratives. Transformative learning takes place through questioning and exploring possibilities, and stories allow this process to unfold gracefully. This happening fortifies discovery and salience with the intersecting, somewhat progressive, and synergistic storied themes of (a) *constructing and co-constructing meaning and identity*, (b) *cultivating wherewithal*, (c) *experiencing community*, (d) *equipping*, (e) *generating ideas and possibilities*, and (f) *disorienting awareness*. By pulling together various aspects of identity, players construct whole, dynamic, and complex views of self, providing clarity and promoting a growth mindset. Players formulate a different, more integrated or transformed picture of self. In line with postmodern approaches to career development the narrative approach gives shape to meaning and sets the stage for transformational learning and intentional action.

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CHAPTER 6: APPROACHES TO CAREER DEVELOPMENT IN LATIN AMERICA

By Amilkar A. Brunal and Alberto Puertas

This article presents a recent overview of career assessment, known in Latin America as vocational, professional, and/or occupational counseling and guidance.

Six approaches to counseling and guidance are presented:

1. study of the demand for access to higher education approach
2. informational approach
3. psychosocial–educational approach
4. psychologic approach
5. pedagogical/organizational approach
6. philosophical–existential approach

These approaches are described with reference to proposals from Uruguay, Mexico, Ecuador, Argentina, Venezuela, and Colombia, and common elements of the proposed approaches are identified.

External Looks at Counseling in Latin America

In my travels throughout Latin America, I have noticed the different realities facing counseling in the new millennium. The challenges are enormous, and achievements are laudable. The challenges exist because Latin America is not homogeneous. Latino nations are united by language and by similar cultural patterns, ancestral experiences, and even faith schemes. However, they are divided by borders, histories, politics, ethnicity, socio-economic status, and national interests. Counseling, as a profession, is also not immune to the lack of uniformity. The United States, which extends from the Atlantic Ocean to the Pacific Ocean, has the strategic benefit of geographic and political balance to promote counseling within all the states. The European Union presents a coherent model, in which different nations have established congruence in terms of guidance. However, there are still dilemmas in the different countries that make up the European Union, and the nations of Eastern Europe do not enjoy this scheme because they are not part of the European Union. I would like to emphasize the hard and pharaonic work of many Hispanic colleagues who, with impetus and perseverance, give themselves to the profession, most without having the resources at hand to facilitate their functions. I will outline some points of subjective appreciation of counseling in Latin America.

Counseling as a Learning Discipline

With certain exceptions, counseling is confined within the framework of psychology in most Latin American countries. There is no general view within the curriculum framework in higher education of the different nations to include counseling as a singular discipline. Counseling presents a draft of a life project that goes beyond the vocational genesis that initiated the

discipline in the world. Psychology, as a science, does not encompass the semantics that counseling presents and offers at present.

Guidance and Public Policy

There is no concrete promotion, within the national political platform, of counseling in Latin America. There is a need for promotion within the different ministries of education and other agencies that are relevant around the continent. There are unnecessary bureaucratic impediments due to the indifference to counseling on the part of policy makers. The participation of the state is crucial to place counseling as a priority within the socio-political sphere of any nation.

Guidance and Psychometric Assessments

There is an emphasis or dependence on the part of many professionals on the use of psychometric instruments as a primary answer to the vocational and counseling dilemmas of the populations to whom services are provided. Psychometric evaluations respond to the movement of scientific methodology emphasized in the 1960s and 1970s when society was perceived in a linear way. We know that the only constant in the 21st century is “change.” Many counseling trends fit the needs of these new generations. For example, the theories of Constructivism (Mark Savickas) and Chaos (Jim Bright) are innovative proposals of counseling that cross borders and cultures. Emphasis is transposed to the individual as the author of their life design and not as a measure of a processed evaluation.

Counseling and Technology

Technology presents opportunities that were unimaginable for previous generations. Guidance as a profession has benefited from the transmission of information immediately to those who use it and need it. However, there is a tendency to replace the professional counselor with the impersonality and digital coldness of the Internet. This phenomenon is not exclusive to counseling. However, the development of the personalized relationship of the advisor and the individual is irreplaceable. Latin America has in its anthropological structure the benefit of millenarian cultures that still emphasize the importance of community and benefit in-group. Culture highlights the value of human relations in all sectors, including counseling, in Latin American countries.

Guidance and Globalization

Because of the drastic changes of globalization, the vocabulary and vision of counseling must adjust to the demands of a new century. We speak of lifelong learning in the academic world, and we speak of global citizens and workers in the occupational world. Within counseling, the term “life design” is being used. In Latin America, we can no longer speak of careers limited to local geography. Moreover, an individual from Paraguay competes with one from India, Nigeria, China, or elsewhere. The approach goes beyond the occupational angle where Super often defined career as a totality of life experiences, where occupation is a fragment of that totality.

Counseling and Society

It is the responsibility of counselors to correctly elevate their occupation and the benefit they bring to the society where they practice. Latin American society needs to be informed of the important role guidance plays in the shaping of future generations. Establishing partnerships, collegial bodies, and work teams is fundamental to the promotion of the profession. The populist policy of many Latin American countries tends to follow the number of possible votes. If parents, young people, and counselors establish a united front, it will be possible to see changes.

The future is challenging, and therefore encouraging for counseling in Latin America. Congresses, such as those promoted by the Red Latinoamericana de Profesionales de la Orientación that needs it so much. In accordance with all these statements, Di Domenico and Villanova (2000) have stated:

The vocational counseling then discusses its own epistemic space, its place in the worlds of education and work, the ways of its institutional insertion and its links with ideological and political interests. Without discussing their relevance, there are still problems that are detestable already in the origins and born, mainly, of the cultural and professional heterogeneity of their territory. Latin America is also home to these disciplinary problems, which have been accentuated by political disruptions, by its educational systems in consolidation, by the precariousness of its economies and by its persistent social asymmetries.

1. Study of the Demand for Access to Higher Education Approach in Mexico

Gutiérrez Gómez et al. (2015) represent this approach for Mexico in *Profiles of High School Student Admissions to the UNAM: Longitudinal Study 2007–2012*.

Sociological Elements

Gutiérrez Gómez et al. (2015) studied the increase in interest of the Latin American middle class in accessing higher education, which according to the authors is the result of the 1968 student movement. The actions of professional counseling have focused on informing the student about the different higher education options. The evaluation of these actions seeks to define appropriate strategies of educational counseling and academic tutoring that positively impact the lives of students, in terms of the possible personal socio-economic impact and the development of their families and communities.

2. Informational Approach in Argentina

In this approach, the direct actions of counselors are based on the use of information and communication technologies (mainly those of easy access in a digital/online way), aimed primarily at students and/or populations not schooled for alternative visuals for their “future education and work projects.” Online interaction alternatives with professional counselors are also offered at different points in the orientation process.

Concept of Counselling/Guidance

In this proposal, the usefulness of virtual communities in vocational and occupational counseling is described. New intervention styles are introduced that describe the ways in which information and communication technologies are implemented, such as collaborative work and forums within an orientation process. The role of the vocational psychologist is addressed as the facilitator of the collaborative counseling process. Social networks and their relation to access to information are presented as a resource in the field.

This contribution aims to provide innovative practices in the field of vocational psychology and advice in virtual environments. Through participation in a specially designed virtual environment, counseling psychologists accompany young people to find their way around and learn about their future educational and/or work projects. The new guidance environments (e-Guidance) aim to exploit the possibilities of guidance, in a context mainstreamed by information and communication technologies, that puts guidance in a broader scenario than the subject's physical location, facilitating the exchange of information among all those involved in the counseling process.

Role of the Psychologist in Virtual Environments

The counselor is responsible for facilitating the process, and the participants are jointly responsible for the maintenance of each community. The role of the counselor in this virtual context is fundamental. The intersection of ideas and comments are the responsibility of the supervisor who organizes the contributions according to the objectives of the workshop and the topic that each forum proposes. One of the ways to deepen reflection is the formulation of questions that help participants explore their opinions, hypotheses, and representations, both the individual and the group. In addition to developing guidance content, the supervisors act as content evaluators. They evaluate and select relevant information for the recipients, which is published on social networks, guaranteeing the reliability and validity of the information sources.

3. Psychosocial–Educational Approach

This approach includes some recent proposals for intervention in vocational/professional guidance, with a clear emphasis on the study of psychosocial factors of academic populations that affect the possibilities of permanence and completion of studies at the level of higher education. Here we find experiences from Uruguay and Mexico.

Uruguay: Sociological Elements

Goñi et al. (2017) is a proposal that presents the conditions of the adolescents of Uruguay regarding the construction of their vocational/occupational projects. It refers to adolescents in the capital, Montevideo, which includes half of the population of Uruguay:

The reality of young people in the country is different and heterogeneous, depending on the region or town where they live and their social and economic situation. They must choose an area of interest when they are too young, so they should not only deal with the

typical problems of adolescents, but also with the lack of information, family expectations and fear of failure. In order to face this situation, it is proposed to work with adolescents and their families on this topic, to talk about their fears and expectations and to provide basic information. Considering the cultural division by gender for the races is considered an important factor in the proposal. which affects your choice. (Goñi et al., 2017)

Through the daily work of the counselors, as well as their participation in discussions, they promote awareness regarding making decisions about the different curricula, and about the benefits of making some changes that allow the student to postpone their choice. The objective of the counseling in this stage is to clarify these elements through discussion and reflection. For adolescents, putting their own prejudices in words, expressing the wishes of the family, and verbalizing fears allows them to reduce their anxiety about the choice. This anxiety, according to Goñi et al. (2017), can sometimes trigger phobic or phobic defense mechanisms that cloud the selection process. The aim is to “accompany” the adolescents as part of the educational guidance task and to promote the search for pertinent information during this time.

Mexico: Sociological Elements

Gutiérrez Gómez et al. (2015) studied the diversity of high school students by means of a longitudinal study of student profiles. Their purpose was to study the problem that exists around the retention of students in high school in Mexico. Empirical data were analyzed in each of the designed dimensions: socioeconomic, cultural dimension, a study dimension, and vocational learning styles in high school students.

As presented in *Integral Program for the Strengthening of the High School of the UNAM (2008)*, students were affected by the following problems that educational counseling must analyze in depth and address:

- significant deficiencies in the previous training of first-year students
- high failure rate
- rote learning
- deficiencies in communication skills
- lack of a second language
- need to strengthen logical reasoning
- weakness in search strategies, selection, and systematization of information
- little information about autonomous learning skills
- little training in information and communication technologies
- desertion and low efficiency
- extensive plans and programs
- need for transversal skills
- support for the professionalization of teachers
- insufficient focus on culture and artistic activities (creativity, innovation, transformation)

General recommendations identified that these problems could not be addressed without a broad and detailed knowledge of secondary school students from a perspective that allows integrating the multiple aspects that characterize this trajectory, the level of autonomy in learning, citizenship, the process of career choice, and the sociocultural context. To generate this knowledge, it is necessary to develop research that provides information on each of these aspects, as well as allowing the understanding and analysis of how these different factors are articulated in high school students.

4. Psychological Approach in Argentina

In this approach, current experiences in counseling intervention are classified based on classical psychological principles, such as “life trajectories” and transitions (Savickas et al., 2009). Here we can find the proposal *Advice in the Postgraduate* of the Argentine team of the University Tres de Febrero, coordinated by Silvia Battle.

Sociological Elements

This approach proposes that vocational and occupational counseling study the interaction with the different contexts of insertion (family, school, work, and higher education, among others). This interaction is fundamental in the construction of life projects and in the development of the personal, educational, and work parts of students’ lives. It is also proposed that this approach accompany students in the various transitions they must complete throughout their lives, and in the construction of their life projects, providing them with tools to face the complexity of the context (Aisenson, 2007; Guichard & Huteau, 2001).

5. Pedagogical/Organizational Approach in Ecuador

This approach classifies intervention proposals based on methodologies built according to the model of educational counseling programs aimed at specialized teachers in the subject (school counselors) or general secondary-education teachers who may receive specific training.

The Ministry of Education in countries such as Ecuador (Ecuadorian Ministry of Education (2015) follow this model.

In this pedagogical approach, professional and vocational guidance includes a set of accompanying actions (educational–psychological–social) and counseling (individual and group). It is aimed at students of an educational institution so that, individually and depending on the self-knowledge and the information available, students make appropriate vocational and professional decisions as part of the construction of their life project.

Interdisciplinary Concept of Counseling/Guidance

Based on this Ecuadorian pedagogical approach, the guiding process must be carried out from an interdisciplinary point of view: The professionals of the Student Advisory Department—educators, psychologists, social workers, and others—can analyze each situation based on their contributions and disciplines to enrich the process of each student.

The School Life Project is understood as “the plan that a person builds about what he wants to do with his life in the future, to achieve his personal, professional and social objectives” (Ecuadorian Ministry of Education, 2015). This framework of autonomy and freedom allows a person to exercise their decision-making capacity through personalized goals, responsible and adapted to their environment.

The training needs of teachers and/or tutors are also raised, with an orientation model that clarifies the purpose of the tutorial action, to carry out the work for moral development. The MDP model integrates three components: personal self-evaluation, personal vision, and personal life plan.

Vocational Portfolio

Another pedagogical proposal, with certain specificities related to a specially designed methodology, can be identified in countries such as Venezuela and Mexico. This methodology has been referred to as “vocational portfolio of the student” and “life project folder” in each country. This interesting pedagogical approach is focused on the systematization of the counseling experiences of the students regarding their own construction of projects of academic life.

Venezuela: Pedagogical Elements

The Venezuelan model is proposed by Dr. Gabriel Villa Echeverry, (2012). Echeverry, positioned at the time in a national system of occupational guidance, proposed as pedagogical elements “the occupational guidance understood as a process of accompaniment along the development of the life cycle to enhance the development of the existential life project ... which uses as one of its instruments ... the vocational portfolio of the student,” defined as “a simple file where documents are stored with vocational information of the student or studentè easy ordering of the same and occupies a limited space.”

Mexico: Pedagogical Elements

In *Life Project Folder: An Evaluation Tool*, by Berra Bortolotti and Dueñas Fernández (2015) of the Benemérita Universidad Autónoma de Puebla, students developed a folder called “project life,” which is applicable as a learning and assessment tool that allows the creation of a rich context for participatory training, through the experience of their own self-orientation process, a process that allows them to use the knowledge and management of the different educational tools necessary for career guidance with a view of vocational counseling.

Mexico: Philosophical Elements

The philosophical elements of this proposal are defined as follows:

The self-guidance tries to be constructed as a reflective and dialogical experience that allows the students to develop the necessary skills for the management of vocational guidance strategies and techniques. Vocational counseling as part of the educational

counseling course is implemented through workshops of experiential self-sufficiency where students of psychology establish a learning of the main strategies and techniques through self-application and self-evaluation. (Berra Bortolotti & Dueñas Fernández, 2015)

Mexico: Elements Related to the Self

In this work, the concept of self-counseling is understood as the possibility for each student to commit to their own orientation process, achieving the necessary competencies for the choice and decision-making with responsibility and maturity. In this work, a folder is defined citing Miguel Hernández (in Blanch et al., 2011: 13): “The folder is a method of teaching, learning, and evaluation that consists of the contribution of various productions by the student through which they can judge their abilities in the framework of a discipline or subject of study.”

6. Philosophical–Existential Approach

In this approach, we find some proposals for intervention with a strong emphasis on issues related to the search for the transcendental meaning of life with an existential nature that seek to overcome instrumentalist, psychometric, and/or basic informative approaches, considering them necessary but insufficient for the work of vocational counseling. In the search to take on the subject from existential approaches, highly personalized evaluations of a deep reflexive nature are developed (not only focused on the choice of career but in relation to the construction of life projects in their entirety), and various methodologies are assumed that combine pedagogical approaches and psychotherapeutics.

Argentina: Vocational Counseling as a Subjective Experience

Rascovan (2016) presents the proposal *Vocational Counseling as a Subjective Experience*. We consider that this proposal represents a more integral approach that contemplates relevant social aspects, a deep psychological analysis, and a dynamic pedagogical perspective that articulates these three axes in actions applicable to the realities of Latin American students.

Concept of Counseling/Guidance

In this proposal, which is an interesting articulation between the processes of individual psychotherapeutic orientation, deep socio-economic counseling is developed about the Latin American realities applied through pedagogical methodologies. This approach is based on the study of a type of society that requires subjects to make decisions, in certain instances, of educational and work routes constructed from personal questions that determine what each person can do at some point in life. Certain periods in life are fundamental to making decisions about the completion of secondary studies. For this reason, professional guidance processes should promote reflection on questions such as: What do I ask myself at this time?

Elements Related to the Self

From this approach, vocational guidance is conceived as ethic-centered on the recognition of the potentialities of the subjects, with respect to their singularities, in relation to the lack of precise knowledge about the enigma of life and the vicissitudes of choice. Subjective vocational guidance needs to be carried out from a critical perspective, inviting people to think about problems in terms of complex networks, using transdisciplinary logic and promoting specific articulations of sections in the approaches and interventions.

Pedagogical elements

Along with the conceptualization of an “agile, dynamic and creative clinic” in dealing with vocational problems, a toolbox is proposed with resources that help activate the election processes. Games such as Very Special Lottery, Occupational Images, Professional History, Survey for Parents, and others are described. The game characteristics, potentialities, and the possible forms of intervention are explained by the professional.

Argentina: The Approach of Resilience in Vocational Guidance

Vázquez (2017) proposes that counselors reduce mismatches between expectations and achievements of clients by facilitating a choice according to the client’s aptitudes and interests, then help them face new situations without being overcome by obstacles. Vázquez defines counseling as “a process of orientation towards the existential phenomenon of the search for meaning and the social construction of life projects” (Brunal 2016; Vázquez, 2017), as an essential task both in the counseling process and in the strengthening of resilience.

Concept of Counselling/Guidance

Counseling is “a guidance process to the existential phenomenon of the search for meaning and the social construction of life projects” (Brunal 2016; Vázquez, 2017). Developing a life project is an essential task both in the orientation process and in strengthening resilience.

Philosophical Elements Related to “Being”

This approach is based on philosophical conceptualizations such as those proposed by Frankl (1988) and Vanistendael (2003): the meaning of life as a personal search. According to Frankl (1988) the meaning of life is a personal search, and Vanistendael (2003), an expert in the field of resilience, includes the life project as part of that meaning. How can we imagine a life project if the meaning has not been found? How can we find the meaning of life if we do not imagine a project in it? It is a circle that can be vicious or virtuous.

Concept of Counselling/Guidance

Counseling is not limited to informing. It is imperative to promote a dialogue that calls for introspection and recognition of possible obstacles. The resilience approach in vocational counseling that I have been building and putting into practice during the last 15 years is

characterized by being clinical, preventive, and operative. It is clinical because it recognizes that people are the single builder of their choice, and is based on an attitude of listening and dialogue. It is preventive because it pursues objectives that can fit in the strategy of primary health care. And it is operative because it tries to raise and eventually solve, in a focused way, the problem that underlies the choice.

This approach is complemented by projective and even psychometric tools. However, its main technique is the open interview, and it is conceived as a strategy that aims at metacognition and strengthening the resilient state of the person who chooses.

Venezuela: The Meaning of Life in Vocational Counseling

Rios Del Moral (2017) provides advice regarding life projects of students.

Philosophical Elements Related to “Being”

This paper reports on the practical applications of empathic interpersonal encounters, in which the person-centered counselor “seeks to help the development of their potentials in crisis situations or need for discernment, to reach self-discovery, trust and acceptance of himself, and the free development of his person, respecting his paradigm or the conception of life and man” (Milano, 2011). This author presents the importance of training counselors in the personal aspect that allows him to connect with others. I understand this to mean being with one another in the present, a present that is totally seasoned from the past and carries within it the possibility of the future. (Binswanger, 1973, cited in Milano, 2011).

Colombia: Transitional Counseling

In *The Search for Happiness, The Search for Meaning: An Existential Approach to Vocational and Socio-Occupational Counseling*, psychologist Amilkar A. Brunal (2016) proposes the concept of “Transitional Counseling” as an approach to develop the professional and socio-professional guidance at moments of transition, moving the individual from the interior of the academic life and the transitions of the academic world towards the trajectories of the environment of work.

According to this proposal, the educational cycles are interpreted as transitional spaces and the life projects as transitional objects in themselves associated with specific transitional objects (e.g., certifications that legitimize the transitions between the academic world and the formal work world), validated socially in transitional events (e.g., graduation ceremonies).

Pedagogical Elements

This proposal offers various methodologies to study transitional events of an academic and socio-labor type, designing reflection–action spaces on the main transitions from the academic world to the working world, studying each one of the factors that affect life trajectories. It proposes the application of methods such as critical analysis of the social, academic, and occupational discourse of contemporary society; methods for school development in its personal,

academic, and psychosocial dimensions; and analytical methods of personal self-knowledge, such as the one called “Existential Matrix.”

Table 1. Existential Questions Matrix

	DOING	HAVING	BEING
DUTY Who should I be?	What should I do? How should I do?	What should I have?	Where should I live? Where should I belong? With whom do I have to be?
DESIRE Who do I want to be?	What do I want to do? How do I want to do?	What do I want to have?	Where do I want to be? Where do I want to belong? With whom do I want to be?
CAN Who can I be?	What can I do? How do I want to do?	What can I have?	Where can I live? Where can I belong? With whom can I be?

Psychological Elements

This proposal offers a methodology to study the transitional events of academic and socio-occupational types and to construct spaces of reflection–action on the main transitions of the academic world towards the labor world, studying each one of the factors that affect the life trajectories. We propose the application of methods such as critical analysis of the social, academic, and occupational discourse of contemporary society; analytical methods of personal self-knowledge; and methods for school development in its personal, academic, and psychosocial dimensions.

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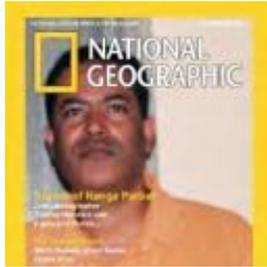
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CHAPTER 7: TRAINING CAREER PRACTITIONERS FOR A VIRTUAL WORLD

By Deb Osborn, Casey Dozier, and Tristen Hyatt

Introduction

Online education has been around for decades, and it will become an essential part of the education framework as we negotiate the fourth industrial revolution. The COVID-19 pandemic accelerated this transition to the virtual world, causing many training programs and clinical sites to immediately shift to online delivery to accommodate student and client needs and to comply with stay-at-home mandates. As the world grappled with trying to understand the severity and associated risks of COVID-19 and adjusted to the “new normal” of social distancing and online meetings, pre-pandemic concerns began to re-emerge. Career decisions still needed to be made, job search activities needed to re-activate or start, training needed to continue.

Complicating these commonly experienced career concerns has been the increased occurrence of depression, anxiety, and loneliness. Racial and socio-economic disparities add further negative impacts. These intersecting concerns require career practitioners to consider clients’ career concerns holistically and select interventions that treat the entire person within the contexts of their career, mental health, and social arenas. Career practitioners must also learn how to best provide services virtually. In turn, those who train career practitioners (e.g., counselor educators, career development facilitators, supervisors) must consider these factors for their students, as well as training requirements outlined by the profession and accreditation bodies and best practices for delivering training in content, clinical skills, and supervision.

In the sections that follow, we aim to identify specific challenges and strategies for training career practitioners in those three key areas, with the hope that these strategies will propel us forward in the training, supervision, and provision of career services in the future as well as the present.

Training Career Practitioners Through Knowledge Building

Professional associations and accrediting bodies have outlined knowledge, skills, and attitudes requisite for ethical and competent career practitioners and counselors. Common components include knowledge of career development theories, assessment, career information and resources, program design and development, coaching, interrelationships among and balance across life roles, job search strategies, diversity, advocacy, and ethics (NCDA, CACREP).

While many career courses and workshops have been offered in an online environment by some for years, the transition brought about by COVID-19 to training practitioners virtually was an acute, immediate, heavy lift for those who were used to, preferred, and gained satisfaction from face-to-face instruction. For many, this was their first foray into teaching online, and it may be that the benefits these instructors experienced in the online environment might compel them to consider continuing the use of virtual teaching and training. For those who were not required to

move teaching and training online, but who are considering it going forward, the considerations and strategies suggested here may be of value.

In addition to transitioning actual meetings to an online environment, instructors and trainers had to evaluate whether activities that worked well in the face-to-face environment would continue to work well in an online environment. With little warning, many instructors had to learn a new platform, such as Zoom, if they desired to continue having synchronous classes, and make decisions about requirements such as whether having the video camera on at all times or even real-time attendance would be required, or if viewing the recording of the meeting would suffice. Some students and instructors found their internet unstable and unpredictable. Others found they were spending hours online, with physical, mental, emotional, and even financial fatigue resulting (e.g., when data limits were exceeded). Still others found they were competing with those in their household to use the computer or for a private space for virtual meetings.

Challenges for providing content and engaging students existed prior to the pandemic but may have become more complex in the virtual setting. Many of the considerations and strategies employed in response to the pandemic will now be useful to consider moving forward when creating and delivering training and teaching post-pandemic. Teaching in an asynchronous format with pre-recorded lectures, and no required synchronous meeting time requires a substantial amount of time and thought in design and delivery. How long should a pre-recorded lecture be? How many should I have? Are there ways to make it more interesting? How do I know the students are actually watching these? How do I achieve course objectives in terms of content and skill building when there is no live interaction with students?

Transitioning from a face-to-face format to synchronous format presents additional challenges. When providing content, instructors may need to identify the most important key points to be covered. Knowing that client screens may vary in size, and the impact of all-day screen viewing on the eyes, instructors should use font sizes as large as possible, words as few as possible, and images as often as possible. To increase engagement, instructors should consider how to involve students in each class or workshop. This might be done through breakout rooms where students can roleplay or discuss case scenarios, or through polling, or through working together while online to create something, or through asking students to mark their opinion on a values line or draw their career path or show a symbol that represents a career value. To enhance engagement, instructors must look through their lectures and slides and purposely create those opportunities for engagement.

Instructors must also consider, inquire about, and be supportive of and responsive to the emotional and social needs of their students. Finding ways to check in with students individually and collectively is encouraged. Taking regular breaks, modeling behavior like stretching or deep breathing, or asking students to change their virtual backgrounds to represent something that brings them joy, or even a brief virtual dance contest can provide temporary stress relief and make social connections. Asking ice breaker questions such as what has helped people thrive (or survive) during COVID-19, movies you can watch over and over, somewhere you want to travel, are all questions you may ask to get to know one another better. Another option is to have a “show and tell” and have students share an object from their space. This is an opportunity to share pets and or personal objects that are meaningful and to share what makes them meaningful.

Sometimes instructors are required to teach both face-to-face and virtually and at the same time. A main challenge in providing simultaneous online and face-to-face instruction is how to

manage the practical aspect of lecturing, facilitating discussions, reading student reactions, and engaging everyone in both classrooms at the same time. Some options might include having all students respond to polls (polleverywhere.com), or work to build something collaboratively online (e.g., on a shared document) or engage in a content quiz with a game like Kahoot!. However, instructors need to consider how students who come to the classroom might feel if all interactions or in-class activities are more catered to online students, and vice versa. However, if discussions are possible, the instructor might consider asking those in the online group to take turns being discussion leaders and reporting back to the group. If the in-class students bring their technology and are willing to use it, another option would be to partner them with an online student for discussions.

Instructors might consider creating stations (e.g., an online station, a with-the-instructor station, an offline station) that students rotate through. For example, consider learning about career theories. The online station might be a breakout room where individuals analyze a case and provide recommended interventions or answer specific questions through the lens of an assigned theorist. This might be done with a partner. The with-the-instructor station might include a brief presentation/review or demonstration of one or more theories, and allow for student questions. The offline station might be locating or designing a visual example of a specific theory's components or watching a video of the theory in action.

Training – Clinical Skills (Practicum/Internship)

There are two constant issues with clinical training that continue to be a juggling act for clinical supervisors. First is providing appropriate supervision to ensure clients are receiving comprehensive services and resources during their career counseling sessions. Second is providing ongoing feedback to the clinicians-in-training and ensuring they receive appropriate feedback to learn, grow, and be challenged at a developmentally appropriate pace. Providing training of cultural skills will challenge instructors and supervisors, who need to thoughtfully consider how to ensure ethical delivery.

When COVID-19 began, we were faced with the decision of whether or not to provide virtual counseling sessions at our practicum sites and implement telehealth career counseling sessions. At first, this seemed like an overwhelming task. Not only were we as providers not adequately trained to provide telehealth services, but neither were the students. Fortunately, many professional associations stepped up to offer free virtual training to accommodate the transition during the pandemic. Additionally, most professional associations broadened coverage to allow students to provide services via telehealth, providing additional relief during these unprecedented times. Once professional associations were supportive through both liability coverage and free training to both clinicians and students, it was a bit easier to make the decision to open up and offer telehealth services. The question remains as to whether this freedom will be extended indefinitely, or when and how that window might close. Supervisors must be attuned to state licensure laws for both themselves, their supervisees, and the clients they serve to assure no laws are being violated in service delivery across state lines.

One challenge that continues both in-person and virtually is scheduling. Previously, sessions were limited by physical room space, clinician time, and the availability of both. Opening up to telehealth services meant there were no longer any space restrictions for sessions. Now, some virtual platforms such as Zoom may limit space so that one can only have one Zoom room open at a time, but users are utilizing breakout rooms to have multiple sessions happening at one time. However, greater liability exists with telehealth services because we cannot simply enter the “room” at any given moment or accompany an individual to a nearby counseling center should a crisis emerge. As a result, we are still bound to not only ethically provide for clients, but also to ensure we can appropriately supervise and provide feedback to clinicians-in-training.

When we began telehealth services, we only offered one session at a time to better control the environment. This meant that each supervisor was watching the full telehealth session. Prior to COVID-19, we often offered three or four sessions during one hour, and the supervisor would float from one session to another, making sure to observe at least a portion of each session. Often times, one or two clients would not show up, so it was typical that about two sessions were happening at one time. The instructor of record or licensed psychologist would watch one session while the graduate student was watching the other session. Students were also trained to immediately inform both the graduate student and the licensed psychologist of any immediate crises including suicidal and/or homicidal ideations that were assessed during the session (before the client left). This model helped to provide appropriate supervision and feedback during sessions, and this model continued after COVID-19. Once we became more accustomed to the telehealth model, we were able to implement breakout rooms, and offer multiple sessions at one time, allowing the supervisor to float from one counseling Zoom room to another.

Once scheduling was resolved, the next step was thinking through a revised informed consent. If you would like to see a sample informed consent, please feel free to contact the author(s). Some unique statements in the informed consent address expectations of the client, because ordinarily the counselor and client are in the same room. Additionally, when the client is in their own space, they may feel more comfortable to engage in recreational activities that they would in the clinician’s office. Some examples specifically addressed in the information consent include the following:

- Be in the same state in which the clinician is licensed to practice (client should inform the clinician of their location).
- Be in an area that is safe and provides privacy.
- Dress appropriately during web-based sessions, as you would if you were attending a session at your clinician’s office.
- Do not have anyone else in the room unless you first discuss it with your clinician.
- Do not conduct other activities while in session, such as driving.
- Do not record sessions.
- Avoid using mind-altering substances prior to session.

The first bullet point regarding location can vary by state, licensing board, or professional association, so that may vary depending on your individual credentials. It is useful to consider what an office with varying disciplines, including social workers, psychologists, and/or counselor educators, may look like, given varying guidelines. In our office, we had psychologists

and counselor educators, so we developed one policy that followed the most conservative rules, which we applied to all clinicians. Many of the other criteria outlined in the informed consent refer to general client expectations unique to a virtual setting, and may be useful to consider when making the decision, going forward, to providing supervision and services in a virtual world.

One essential thing learned about transitioning services to a virtual world was that it was important to model a sense of calmness. For example, many practitioners-in-training were concerned about technical difficulties, not obtaining a signature correctly during a first session, or losing an internet connection. It seemed essential to reassure them that despite any technical issues that may arise, to remember that above all else, they are still talking with people who are seeking their assistance on the other end of the technology. If something did not work properly with a signature, they could document the technical difficulties and utilize the chat feature in addition to verbal consent as backups, and signatures could be obtained during the following session. If the client demonstrated any hesitations, then that might be an indication to pause the session. In many ways, the clinicians-in-training actually found the chat features worked to their advantage because they could privately ask questions of their supervisors during sessions. Much like anything, after the initial telehealth session, many nerves were calmed and most felt relieved because much of the anxiety came from fear of the unknown and what might happen. Thus, decreasing the unknowns and thinking through potential pitfalls prior to providing services and supervision is a recommendation for those considering this mode in the future.

Something else we found particularly useful in preparation for telehealth was to practice with one another to see what it was like to utilize the technology, especially for an initial session. Once HIPPA-compliant Qualtrics became available, we transitioned the informed consent from an editable word or PDF form to Qualtrics and utilized the remote-control feature to give clients access so they could type in their information and sign their name. There was a slight lag, but overall, this seemed to work quite well and allowed clinicians and clients to cover essential information while also obtaining initials and signatures where needed. Exploring and evaluating how to collect and keep important client paperwork in a manner that assures confidentiality should be a key consideration when deciding on providing services and supervision in a virtual world.

As mentioned previously, there are many potential barriers to providing telehealth services (Pierce, Perrin, & McDonald, 2020), whether that is due to having HIPPA-compliant technology, adequate telehealth training, or concerns about clients having access to appropriate private settings or technology. There are additional concerns, such as clients with increased mental health concerns and the lack of ease to connect clients to mental health resources, because clinicians cannot simply accompany a client to a counseling center or wellness center after or during a career counseling appointment. Additionally, if a medical emergency were to occur during a session, the clinician and client are not in the same physical location, so calling emergency services is not as easy as dialing 911 and having someone immediately sent to the clinician's location. These were additional procedures that were essential to consider before beginning telehealth services. There were several documents we put in place to help clinicians feel as if they had more control, since so many variables were now out of their control. Below are a few examples of changes made prior to providing virtual career counseling:

-
- Identify emergency contact name and phone number.
 - List emergency service numbers (police department, fire department, local hospital).
 - Identify preferred local hospital (in case of emergency).

This information was collected during the initial session with clients so that if an emergency did occur, it was easier to contact local emergency services who could quickly respond. Additionally, the client was required to enter their current physical address before entering *each* virtual session. If the client did not always use the same location, this step verified that their location for this session was confirmed and on file. During the initial session, the client was informed of this process, the reason they were asked to enter their location, and the reason for requesting emergency contact information. The emergency contact form also provides their written consent for the clinician to contact the individual in case of any emergencies.

These are essential emergency procedures if something happens during a session. In addition, clinicians were concerned about appropriately screening clients to strive to provide appropriate telehealth services. Clinicians conducted initial screening interviews with new clients in order to assess overall risk level of incoming clients and their overall fit for telehealth services. Below are some considerations to assess fitness for telehealth services. These criteria might indicate a client is not fit for telehealth services:

- Their goals are not a fit for our services or for the competency of the clinicians available to provide the service.
- The individual will not be within the state in which the clinician is licensed during the desired time of the sessions (these criteria vary by state and/or licensing board).
- The individual does not have a private location for the sessions.
- The individual does not have access to adequate technology for the sessions, or to register for the session.
- The individual is not willing or able to adhere to the emergency management plan.
- The individual's level of risk or clinical needs require a higher level of care.
- The individual is a minor and is unable to have a legal guardian or parent on site with them during the sessions.
- The individual is not comfortable using technology, even with an explanation and/or demonstration.

Initial screenings helped the supervising clinician as well as the practitioner-in-training feel more at ease conducting teletherapy. It also helped everyone feel more empowered to ensure we were striving to provide comprehensive and appropriate career services to clients and were not trying to provide comprehensive mental health services for someone who truly needed ongoing mental health counseling (rather than career counseling). The screening session allowed an opportunity to test the technology, which also helped ease those anxieties for everyone. Creating screening questions such as the ones outlined above are recommended for those considering providing services and supervision in a virtual environment going forward.

Training – Supervision

Nearly twenty years ago, the benefits and significance of telehealth services were recognized in the literature by a review conducted by Laszlo and colleagues (1999) who stated that behavioral telehealth (including therapy over the internet) had

the potential to improve the delivery of health care in the United States by bringing a vast array of services (such as mental health services) to under-served communities. TeleMedicine, TeleHealth, and technology, in general, has the potential for increasing access to quality health care, including mental health for all. The future of this technology and its capabilities are being created everyday (p. 305).

Despite this knowledge, telehealth training is not built into *American Psychological Association toolkit assessment measure*, so many APA-approved clinical sites or doctoral programs do not build this telehealth competency into their programs. Nor are these standards built into the *2016 CACREP Standards*. CACREP standards include online instruction, but do not specifically include information about telehealth standards. Furthermore, Pierce, Perrin, and McDonald (2020) summarize literature that demonstrates consistent findings that early-career psychologists report insufficient training related to telehealth. Trainees reported an interest in learning more about ethical and legal issues related to telehealth, as well as in training about starting a telepsychology practice, including reimbursement procedures, system costs, safety/crisis information, and more details comparing traditional counseling with teletherapy.

These positive outcomes in terms of attitudes and willingness to engage in telehealth going forward are encouraging. However, the trainings were specific for counselors and psychologists. Many career practitioners may not have easy access to these trainings because of their professional identity. Seeking out trainings to build knowledge and skills in the area of delivering services online is highly recommended as an ethical step towards being able to provide services in a virtual world moving forward.

Trainees interest in telehealth services, along with the changes now happening as a result of the pandemic, present a real opportunity to shape the landscape for supervision, training, and service-delivery for career counseling services. Now is the time to begin comparison studies to see if teletherapy is actually beneficial for everyone, or if teletherapy is more useful for certain types of clients, and if so, who benefits the most. Beginning to answer these questions can help clinicians and trainers feel more confident providing services in a modality that is the best fit for those who need it. Teletherapy also provides an opportunity to reach a population who may not otherwise have the courage, or means, to show up in person.

In the changing dynamics that COVID-19 introduced to psychology and counseling training programs, one of the most pressing challenges has been ensuring student competency for providing online virtual services. As stated above, most curricular programs do not have specific requirements for teaching students how to provide virtual services. As an instructor, virtual services and ethics is something that does comes up in class discussions and some educators might build lectures around providing virtual services; however, COVID-19 has proven that every educator must train students to be able to be successful, competent, and ethical in the

virtual world, in an intentional manner. Educators should know best practices for providing virtual services to guide students in the virtual domain, and educators should remain current with best practices to provide holistic supervision ethically online.

There are many challenges that must be considered when teaching and supervising online. One of the challenges with online counseling services is ensuring that services are being offered to clients within the same state as the counselors-in-training. During the beginning of COVID-19, policies had to be created to ensure that students in counseling and psychology programs were ascertaining a client's whereabouts before providing services. Ascertaining a client's location is necessary for ensuring client safety, should a crisis situation arise or should the client share thoughts of harm to self or others.

In addition, students must also make sure that clients are in a safe and secure location so that their privacy is respected, and counselors-in-training should also be in a secure and private setting. In discussing these concerns with counselors-in-training, it is pertinent to utilize all resources to help students gain experience and confidence with assessing client whereabouts, client safety, and client privacy. Students have to become comfortable and competent with being online with their clients, and it is the responsibility of educators to provide learning opportunities to them for practice. Role plays have been utilized to help students grow comfortable with working online for part or all of their practicum and internship experiences. Role plays of online sessions, with crisis present, have been utilized. In fact, role plays of going over informed consent, HIPPA policy, and asking a client's location have been completed over Zoom, with students in practicum and internship. Additionally, online discussion forums have been added to all courses to allow students to express concerns and share with one another. These forums allow students to share and learn from one another, while educators and supervisors can provide guidance and support over these forums. Creating forums and opportunities to practice through experiential activities such as roleplays are recommended for those considering acting in the role of a supervisor in a virtual world.

As we move forward post-COVID-19, one of the most important facets will continue to be communication and understanding from all parties. Students are learning, educators are learning, and those receiving services are learning. For this reason, educators should model appropriate use of online technology and should encourage open communication with students. Only through open dialogue and understanding of the changing dynamic can educators meet students' needs to help them to service clients.

Conclusion

COVID-19 catapulted career practitioners, counselor educators, and supervisors, as well as current and potential clients, students, and supervisees, into providing, training, overseeing, and receiving career-related services in the virtual world. Lessons are still to be learned on not only the practical side of "how do we do this well," but also in terms of best practices. This manuscript presented some of the authors' collective learned lessons and recommendations for surviving and thriving in various roles in a virtual environment.

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CHAPTER 8: JOB SEARCH OF THE FUTURE

By Katharine Brooks

A popular meme is circulating through social media: “Can we all agree that in 2015 not a single person got the answer correct to “Where do you see yourself five years from now?”

This funny (and accurate) meme weighs on my mind as I try to write this article about job search in the future. I am not sure any of us can state where we will be even one year from now, given all the disruption we are experiencing. If you subscribe to the chaos theory of career development, you certainly know the hazards of prediction, as applied to career planning. After all, the process is not linear, and things emerge. As Dr. Scott Barton stated in an article in *The American Psychologist*, “The presence of chaos suggests that even if we are able to characterize all the variables in a nonlinear system completely, general patterns of future behaviors may be the best we can hope to predict.” (2010, p. 7).

But fortunately, I have had time to ponder the future of the job search by exploring the past. For two years, I have had the honor of working on, and updating, Richard Bolles’ classic career book, *What Color is Your Parachute?* (2019), which this year will celebrate its 50th year of publication.

The book was not new to me, of course. I first read it in college when I was trying to figure out how my degree in sociology could be valuable in the workplace. Later, it was a textbook for a class on “Vocational Aspects of Disability” in my master’s in rehabilitation counseling program at West Virginia University.

Because Richard Bolles’ ideas about the job search are so ingrained in career thinking and are now considered standard practice, it would be easy to lose sight of how ground-breaking his ideas were at the time. His book introduced these ideas to the public at large, and one could argue that career counseling and coaching have never been the same.

Two practices in particular merit attention. With the introduction of the Flower Exercise (so titled because someone suggested to Bolles that each item/essay was like a petal on a flower) Richard Bolles introduced to the public a radical idea: that you could—and should—start with yourself and your traits and needs before approaching the job market. At that time, most people searching for a job simply opened their newspapers to the “want ads” (which were divided into female and male categories so one gender would not make the mistake of applying for a job clearly reserved for the other!), review the job ads, and apply for the ones they thought they might qualify for. It was a “see what’s out there and apply” philosophy. The market controls the job search, so to speak. Bolles insisted that all job searches start with yourself before looking at the market.

The other ground-breaking concept was the “information interview,” where you would seek out someone in your field to learn more about it—while being careful not to ask for a job or even

accept one if offered. Bolles was adamant that information interviews be compartmentalized and never cross over to job interviews.

In his use of diagrams and storytelling, Bolles emphasized the importance of visual thinking (the Flower Diagram and other charts) and the narrative structure (writing essays) to identify strengths and clarify thinking. He introduced a systematic and logical system for understanding yourself and the job market, thus improving the odds that one would find the “perfect job,” which Bolles described as a match between one’s knowledge, skills, interests, and values and the characteristics of the position.

So, in the writing and revising process of *What Color is Your Parachute?* I started with these evergreen foundational concepts, and then updated the processes to better fit the job search of the present—and the future. Some of this was easily done by including a better gender balance in the examples, assuming the readers had a greater grasp of technology, providing an increased focus on diversity and inclusion in the workplace, and strengthening Bolles’ instructions that one seek a better “fit” in the workplace. Other updates included even greater emphasis on the value of developing a stronger social media presence, preparing for online interviews via Zoom, and a continued focus on developing hard and soft skills.

With the advent of easy online searching, concepts that Bolles emphasized years ago are, and will be, more important than ever. There is no excuse for a job seeker not to thoroughly research the career field, the specific job description, and the employer before proceeding. Every resume and cover letter must be personalized to the position and developing one’s personal brand online is increasingly important in many career fields. Employers expect the candidate to have done their homework.

But the job search in the future will, by necessity, be influenced by the jobs and the workplace trends of the future. The proposed “workplace of the future” will require different skills in the workers and different skills in the job search process. No one denies the continuing disruption of the workplace. Two areas in particular affect the job seeker: the increasing presence and influence of machine learning and artificial intelligence, and the relocation of work from the traditional workplace to the home.

In September 2020, McKinsey & Company published a survey of business executives titled *What 800 executives envision for the post-pandemic workplace* (Lund et al. 2020). Many of the insights gleaned from the survey will have a direct impact on the job search of the future.

Not surprisingly, a key finding that will affect the job search was the continued growth and influence of technology, especially machine learning and artificial intelligence. This increasing automation will affect virtually every job and result in the elimination of many jobs, along with the creation of new ones. This increasing reliance on new technology will require workers who are able to learn and adapt to constantly changing job duties. Employers will need to invest in more training, and only workers who are open to learning and growth will succeed in this environment. It follows then that job seekers will need to present themselves as learners with a growth mindset, who can adapt to change. The growth and sophistication of artificial intelligence

will likely lead to better career assessments, and systems that can help match the worker to the job.

The McKinsey survey also noted an expected increase in contract workers and gig workers, with fewer traditional full-time employees. Job seekers will need to respond to this trend, with a continued focus on the skills needed to not only perform the necessary tasks but will also need to have an entrepreneurial mindset that allows them to work independently, and for more than one employer at a time, if needed.

Additionally, the report notes that more companies are planning to continue allowing their employees to work remotely. Job seekers will need to research this aspect of an employer carefully, and determine whether their geographic location will affect their ability to find employment. If they can work remotely, they might be able to work from anywhere. This provides a great deal of flexibility for their search. However, if their work demands that they must be physically in the location of their work, this too will have an impact on their search. Many companies are moving toward a hybrid work structure, where some hours will be spent in the office and the rest in a remote location. Again, the job seeker will need to clarify the employer's expectations to ensure that there is a successful match between their location and the employer's location.

As the work-from-home environment becomes more common, the issue of work/life balance will need to be revisited. Many remote workers have discovered in this pandemic that they are no longer working from home—they are living at work. It can be hard to compartmentalize work and home life when the two are the same. Job seekers will need to know their own strengths and limitations in this area. The job seeker who can articulate how they balance their remote work will be an asset to an organization.

Diversity and inclusion efforts by organizations will increasingly benefit workers who previously would not have been interviewed or selected for positions. Social justice movements and a new emphasis on the value of inclusion and equity in the workplace will continue to open opportunities for workers. The job seeker who can demonstrate their own uniqueness and an ability to bring diversity in the form of new perspectives and ideas will be a valued candidate.

The job search of the future will continue to be influenced by changing technology. It is impossible to overstate the importance of the Internet even now in the job search. The process of job-seeking and interviewing, for example, is continuing to evolve as organizations use chatbots, online screening, applicant tracking systems, and intelligent interviews. Increasing use of data analytics and algorithms will help organizations develop sophisticated assessment tools to screen applicants. Even job fairs are conducted virtually and will likely continue to do so beyond the pandemic. All these developments then influence what the job seeker needs to do: from adding keywords to resumes and social media sites to make them bot-friendly, researching through sites like Glassdoor to learn more about the work environment, ensuring that their online profile represents their best features, using Dropbox to store their applications and other job search documents, or using apps like Trello to track their progress.

Even now, candidates need to be prepared to interact with employers through their computers and phones. Phones provide an immediacy of response that other systems cannot, and texting is becoming popular with employers. The candidate who does not have strong Internet connection will be negatively impacted in a Zoom interview, and this is where a digital divide may exist between those who have secure Internet connections and those who do not. Poor access to quality technology will cause a disadvantage for some: people who do not have good access to broadband and devices will continue to fall further behind in the process. Employers who genuinely care about diversity and equity will need to consider their reliance solely on computers, when potentially strong candidates may simply not have the same level of access.

But it is about more than having the basic connections. Candidates need to be comfortable in the virtual environment. Becoming an expert in virtual interviewing will be imperative. Candidates with poor lighting or distracting backgrounds will be greatly disadvantaged in the search. And social media is no longer just a nice option: strong branding is imperative in the job search where the employer seeks you. Career counselors and coaches will need to instruct their clients on the savvy use of computers in the job search process.

Books like *What Color is Your Parachute?* will continue to provide invaluable information for individuals for the job search. They provide the knowledge and training by focusing on the key elements of the job search: the need for self-exploration first, the need for well-written resumes and cover letters, the importance of researching your career field, and the importance of networking. A computer and access to the Internet will only help when the job seeker knows how to conduct a strong job search.

A major theme for the future will continue to be career readiness. To be able to succeed as a jobseeker, you must be ready for the career you're seeking, even when that career may not exist currently. In my book, *You Majored in What? Designing Your Path from College to Career*, I discussed Dr. Elizabeth Alexander's research with forty key futurists on how someone could prepare for this future. They noted that the person's thinking needed to be broad and reach across disciplines, and be analytical, creative, and strategic with a focus on lessons learned through the scientific method. Having an entrepreneurial mindset, even if one is not an entrepreneur, is important.

The futurists also indicated that to succeed in the future workplace, job seekers needed to be strong generalists, capable of thinking and working across a broad spectrum of areas, while at the same time developing some specializations valued by employers. For example, they needed to develop their broad skills in public speaking, writing, and problem-solving, while also enhancing technical skills through coding, programming, or other computer knowledge.

Lifelong learning, then, becomes the key to success. And one interesting finding of Dr. Alexander's research is that the futurists stressed the need to be an "unlearner"—you must let go of old technologies or old ways of doing things. The focus needs to be on skills, not professions.

The most interesting finding from her research, in my opinion, was an identification of the six "Cs" needed to be successful in the workplace of the future: Clever, Compassionate, Connected,

Courageous, Creative, and Curious. The successful job seeker of the future would be wise to incorporate these characteristics in their job-seeking behavior.

So, the challenge is great for career counselors and coaches. How do you help prepare your clients for a future that is rapidly changing and developing? How do you help them search for these future positions and ensure that they find the fulfillment and satisfaction they are seeking? Here is how:

- by preparing them for constant change
- by helping them develop the necessary traits for lifelong learning
- by helping them not only to see but also to demonstrate and articulate their strengths to a potential employer
- by insisting that they develop the necessary technical savvy to use technology well in their search

And ultimately, by going back to the basics of books like *What Color is Your Parachute?* Know yourself and know the workplace so well that you are able to find the best match possible, whether that's the "perfect job" or the one most close to perfection.

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CHAPTER 9: REINVENTING CAREER SERVICES FOR THE FOURTH INDUSTRIAL REVOLUTION

By Jenn Long Leard

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Re-inventing Career Services for the Fourth Industrial Revolution

The fourth industrial revolution (4IR) brings an unprecedented pace of change, innovation, and digitization that has begun, and will continue, to affect every aspect of our way of life and the way we work. Career services is being called to both keep up with the pace of change and support the career and professional development of clients and students facing new systems, processes, decisions, and complexities as they navigate the rapidly emerging work landscape. Career professionals, employers, workers, and students will need to re-evaluate expectations of work, career, and life roles to adjust to the new and in some cases reduced opportunities and increasingly flexible structures of work anticipated in 4IR. Critical needs surrounding diversity, equity, inclusion and access, mental health and wellness, community, connections and feedback systems, tech and virtual capabilities, and self-driven career management must be considered as career professionals invent and re-invent frameworks, services and resources to meet the demands of 4IR global and digital world of work.

What to Expect in the Fourth Industrial Revolution

Defined by robotics, artificial intelligence, the Internet of things, digitalization, and automation, 4IR “is sometimes described as an incoming thunderstorm, a sweeping pattern of change visible in the distance, arriving at a pace that affords little time to prepare” (Deloitte Global, 2018, p. 8). Three defining components of 4IR are velocity, scope, and systems impact, most notably velocity. Schwab (2016) asserts that “the speed of current breakthroughs has no historical precedent. When compared to previous industrial revolutions, the Fourth is evolving at an exponential rather than a linear pace. Moreover, it is disrupting almost every industry in our country.”

New technologies will cause disruption that will impact business models and the value proposition of existing products and services (Selamat et al., 2017). Technological advances and artificial intelligence (AI) have already begun to impact the lives of populations around the world and improve efficiency and life quality for many, particularly those with the means to afford “access to the digital world” (Schwab, 2016). Access is a major theme of 4IR, both within and outside career development. The 4IR is anticipated to bring increased access by reducing barriers of physical space and time. On the other hand, economists have highlighted that 4IR also has the potential to “yield greater inequality,” especially as it causes disruption and displacements in the labor market (Schwab, 2016).

Blurring the lines between the biological, physical, and digital worlds, 4IR will both eliminate and bring new career opportunities, and will significantly affect the ways in which work is done.

Hirschi (2018) noted that “It seems clear that digitization and automation might therefore be one of the most important issues to shape the future nature of career choices, career development, and career counseling” (p. 192). Schwab (2016) further identifies the wedge that 4IR is likely to bring in both displacement of workers and increased opportunity segregation, giving “rise to a job market increasingly segregated into ‘low-skill/low-pay’ and ‘high-skill/high-pay’ segments, which in turn will lead to an increase in social tensions.”

From a holistic lens, 4IR “will change not only what we do but also who we are. It will affect our identity and all the issues associated with it: our sense of privacy, our notions of ownership, our consumption patterns, the time we devote to work and leisure, and how we develop our careers, cultivate our skills, meet people, and nurture relationships,” (Schwab, 2016). In their Framework for Action, Deloitte Global emphasized that “While some people are ready to face the challenge, equipped with the tools to brave the change and take advantage of its effects, others do not even know a storm is brewing” (p. 8). Awareness of, openness to, and readiness for the coming change will be important components of career professionals’ work with clients and students.

Additionally, 4IR will continue a wave of innovation. With it we will experience the “digital consumer, who enjoys more interactive and personalized experiences thanks to SMAC (social, mobile, analytics and cloud) technologies; companies are revolutionizing their business with the use of artificial intelligence, robotics, cognitive computing, and the Industrial Internet of Things (IOT)” (Selamat et al., 2017). Selamat’s insights have both implications for the world of work, consumers, and business strategies, as well as for career services professionals across all practice areas (K-12, higher education, private practice, and business and industry). Traits and habits of “digital consumers” also define current and future clients and students, who will continue to seek interactive and personalized experiences.

Jobs of Tomorrow

In the Future of Jobs Report 2020 by the World Economic Forum, an estimated “85 million jobs may be displaced by a shift in the division of labour between humans and machines” (Whiting, 2020). The report went on to highlight that “this disruption is counterbalanced by job creation in new fields: the jobs of tomorrow. Across the 15 industries and 26 economies covered by the report, it is estimated that some 97 million new roles may emerge that are more adapted to the new division of labour between humans, machines and algorithms” and “disruption is anticipated to continue to occur in areas ripe for automation,” (Whiting, 2020). As might be anticipated, the jobs of tomorrow include an increase in data analytics and scientists, AI and machine learning, big data, robotics, software and application development, digital transformation, and the strategy, marketing, and operations needed to build, deploy, and manage them. The report highlights that new jobs will also emerge in digital marketing, strategy, business development, process automation, and information security (World Economic Forum, 2020).

Connected to the current and future need of career professionals and innovations in career services, Selamat et al. (2017) notes that growth will also happen in areas related to mental health, freelance, multi-intelligence, creative disciplines, and high emotional quotient roles, and that “the best talent is not the machines but a combination of both humans and machines” (p. 49).

Preparing for the jobs of tomorrow includes the need to pay careful attention to and invest further resources in future generations and global youth education, development, and employment. Teng et al. (2019) cited that “youth unemployment (those aged 15-24) is a global issue, with this segment of the workforce exhibiting three times the unemployment than that of adults (Ibrahim and Mahyuddin, 2017)” (p. 590).

Beyond jobs, “for business to remain competitive, they should rethink how and where work is done, thereby potentially reshaping their organizational structures, cultures, and processes to fit these changing developments” (Deloitte Global, 2018, p.16). In response to the 2020 COVID-19 pandemic, most employers and workers were required to quickly shift to working virtually (where possible), assess processes and protocols, re-align organizationally, and make complex decisions about what, how, and where work could and would continue. The pandemic catapulted the world of work into the reality predicted by Deloitte Global in 2018. Post-COVID-19 pandemic and in 4IR, we can anticipate the following five shifts in practice and approach that have implications for the future of career services:

- employers reducing or eliminating on-site work and increasingly leaning into a “work from anywhere” culture (companies like Adobe, Amazon, Microsoft, and Facebook have announced permanent remote work plans)
- shifting hiring practices to focus on expertise, core capabilities and transferrable skills to deploy workers to align with changing business needs (hiring company employees vs. employees for a specific role/title)
- increased emphasis, by employees and employers, on self-care, wellness, mental and physical health as workers adjust to new work environments, complexities of work-life management, and increased speed/velocity predicted of 4IR work
- strategies, systems, and processes that emphasize leaner practices, efficiency, scalability, and automation, with emphasis on financial stability, diversification in products/services, and readiness for unanticipated future global crisis
- recruitment for 4IR-specific skillsets that emphasize resilience, agility, tech savviness, analytics, and efficiency

Re-Inventing Career Services

Career services, both as a practice and as a profession, faces the need for re-invention and new invention in preparation for the changes to come in 4IR. Clients and students are already beginning to experience changes in available work options, how we work, and how we prepare for and navigate work and career development. These changes are predicted to continue at rapid speed. Hirschi (2018) further highlights that “Career professionals can play an increasingly important role in helping people make sense of these changes and obtain, evaluate, and apply career-relevant information for their career decision making and career planning” (p. 201).

The 4IR brings pressing issues to the forefront for career development professionals to adapt to the continually emerging needs of clients and students. Among these, clients and students will need to increasingly, “(a) be self-directed and flexible in one’s career development, (b) engage in

self-directed career management over the lifespan, (c) create a sense of meaning and identity in the work role despite nonstandard work arrangements, and (d) secure work that is able to fulfill basic human needs despite the loss of traditional employment relationships” (Hirschi, 2018, p. 195). Career professionals can help clients and students both understand and navigate the changing world of work and can emphasize the need for individuals to be “flexible, creative, and innovative” in their approach to career development in 4IR (Oakley, 2019).

As part of career and professional development, education and credentialing needs will adapt to meet the demands of the changing labor market. Increased opportunities for self-directed learning, micro-credentialing, and certificate programs will continue to challenge the return on investment of 4-year and advanced degree programs. Colleges and universities are currently called to re-imagine and innovate to meet the changing needs of both students and the market in a more affordable and equitable way. Hirschi (2018) highlights the implications for career professionals, in that increasingly “career counselors can help clients to identify learning and training needs, as well as assist them in finding and successfully completing trainings and education, including capitalizing on the increasing number of online resources in this regard” (p. 201). Dey and Cruzvergara (2019) argue “that even within a 10 year time frame, change and experimentation within the framework must now become the norm as constant iteration ensures relevancy.” Evaluating, re-inventing, and further inventing career services at an increasingly frequent cadence will be necessary to keep up with the speed of change in 4IR.

Five areas that Dey and Cruzvergara (2019) identify for colleges and universities to focus on building and re-inventing to align with current and future career services needs include “1. Systemically Integrate into Academics; 2. Build Scalable Structures; 3. Teach Life Design + Work Skills; 4. Measure Impact over Input.” In addition, Global Deloitte (2018), identified two more focus areas for youth workforce development as “reimagine 4IR as a unique opportunity to be welcomed, not a problem to be confronted” and “reframe the possibilities for marginalized youth, including those who historically have been difficult to reach, with particular attention to women and girls” (p. 5).

For clients and students across the lifespan, holistic models of career development and services that focus on and embrace the whole person stand to align with the needs of 4IR. Hirschi (2018) identifies that “we can expect an increasing interconnection between work and nonwork” and, specifically, “examining such issues might be informed by the protean career model that stresses a whole-life perspective on career management (DiRenzo, Greenhaus, & Weer, 2015), as well as by career construction and life design approaches that focus on how people can integrate diverse identities into a meaningful personal narrative (Savickas et al., 2009)” (p.199). The lines between personal and professional life will become increasingly blurred with opportunities to work from anywhere, flexible schedules, and more contract and freelance work. Career counseling and coaching work around boundaries, screen time, home offices, access to technology, and healthy work habits will continue to rise as clients and students negotiate new complexities in career decision-making and work-life management.

While 4IR will bring innovation, new roles, and career paths yet to be created, it will also be increasingly volatile, uncertain, complex, and ambiguous for career professionals as well as clients and students in multiple areas of personal and professional life. New stressors will be felt

around balancing short-term work needs with longer-term work and career goals, where transferrable skills, professional storytelling, and ability to identify and connect to emerging market needs will be critical for individuals to position themselves for future opportunities amidst frequent change.

Five Points of Focus for Career Services in 4IR

When it comes to re-inventing career services, there are five areas of need that are becoming rapidly more pressing for career professionals, educational systems, and industry to respond to and act on.

Diversity, Equity, Inclusion and Access

Any conversation about re-inventing career services in 4IR is incomplete without a focus on and renewed commitment of all career professionals and the field at large to diversity, equity, and inclusion (DEI), as well as to access in an increasingly tech-reliant and digital world. White and Watson (2020) assert that “It is imperative for career practitioners to recognize and address diversity, equity, and inclusion concerns and issues when providing services.” Advocating for the equal access, opportunity, pay, and inclusion of all people—most especially black, Indigenous, and people of color (BIPOC)—in the workplace, recruitment, hiring process, and in all aspects of both career and personal lives continues to be necessary and the voice of career services in this social and global crisis must be heard.

Dey and Cruzvergara (2019) have often discussed the critical need of equity and access in their work focused on re-inventing career services within higher education, remarking that “higher education’s ultimate return on investment is equity.” In a Career Developments’ interview with Leard (2020), Andy Chan of Wake Forest University outlines that:

Once a person and/or institution has gone from listening and learning, they can move toward understanding what the truth is, what the history has been, to lamenting this reality within their own heard, their own soul, and in their own culture. After fully understanding and lamenting, they can then start to determine the appropriate actions to take. Actions taken too quickly will likely be short-lived or it will possibly be the wrong action.

Career professionals will need to assess multi-cultural career counseling, coaching and/or educating capabilities, inclusivity of frameworks and models used, and resources provided that further DEI and access. One notable place to start for career services teams and career professionals is to consider the following: How do you, your team, and/or your community define “professional”? What standards of “professionalism” are you teaching or perpetuating? How do these standards include or exclude? And how have these standards normed against people of privilege, especially a white male culture?

Mental Health and Wellness

With increased change, complexity, uncertainty, and “new,” whether perceived as positive or negative, comes increased stress, decision-fatigue and levels of input that bring mental health and wellness needs to the forefront. The 4IR world and workplace is anticipated to exhibit this type of environment and further complicate career decision-making and life management, requiring increased access to mental health and wellness resources. Bauer-Wolf (2019) recently reported that “more than 80 percent of top university executives say that mental health is more of a priority on campus than it was three years ago.” This trend of increased mental health challenges and wellness needs, both for students and clients across the lifespan, increased in 2020 due to the COVID-19 pandemic. Career services that consider the whole person and support the interconnectedness of career and all life roles best align with rising mental health and wellness concerns.

The 4IR requires resiliency, “The capacity to adapt to and overcome any stressor, trauma, adversity, or situation that is challenging” (Solomon, 2020, p.7). Resilience directly connects to the wellness of clients and students and how they manage work and life, as “wellness captures the emotional, physical, social, economic, and psychological aspects of a person’s well-being. Individual well-being will undoubtedly affect resiliency levels in a stressful situation” (Solomon, 2020, p. 8). The 2020 COVID-19 pandemic set new expectations of the need for resilience and opportunities for stories of success demonstrating the resilience to overcome unexpected situations.

Optimism, the belief in possibility and opportunity, is an important factor in navigating complex career and life transitions and decisions. Franklin et al. (2019) note that “a common connotation for optimism is having a positive outlook of the future. Individuals considering career change benefit from positive thoughts and benefits about their future, and these cognitions make it easier to have hope and to take inspired action.”

Community, Connections and Feedback Systems

There has already been a shift by many away from a networking framework, often perceived as transactional or inauthentic, to a professional community and relationship-building model that encourages clients and students to consistently expand and attend to relationships that align with their career and life curiosities. Further emphasizing the power of professional community, Solomon (2020) reports that “Networking is praised as vital to applying for jobs, but it is crucial to remember that the heart of networking is creating a community” (p. 8). An emphasis on communities as an approach to supporting career development, access, and opportunity will be needed to create sustainable networks (Dey & Cruzvergara, 2019) and attention to building trusted systems of feedback will help clients and students navigate increasingly complex career opportunities and decisions.

Selamat et al. (2017) incorporated the work of Woolf, et al. (2013) to emphasize two “grand challenges” that AI can contribute to higher education (also applicable more generally to clients in all stages of career and life development) as, first “virtual mentors for every learner: Omnipresent support that integrates user modeling, social stimulation and knowledge

representation” and, second, “addressing 21st century skills: Assist learners with self-direction, self-assessment, teamwork and more” (p. 27).

Additionally, in a fast-moving, complex 4IR world, systems of feedback for career decision-making and professional growth will be critical to success. Individuals who have access to mentors, industry professionals, leaders and trusted sources who can provide direct input and feedback are important with increases in access to information and, specifically, non-referred and verified sources. With so much input and “advice” available, clients and students will benefit from cultivating trusted systems and sources of feedback. Chan acknowledges that “Connections and access to people are, and will continue to be, important. When career professionals, especially in higher education, have real market connections and a network that they can connect their clients with, they can provide distinctive value beyond helping their clients to be career ready” (Leard 2020). Career counselors, coaches and practitioners in private practice can further prepare clients for 4IR by both emphasizing the importance of professional community building and helping clients identify sources of connection, community, and feedback.

With an increased need to build community, connections, and trusted feedback systems, comes the need for increased equity and access. Dey and Cruzvergara (2019) assert that “the focus of career centers will hinge on facilitating social mobility through equitable access to connections and experiences for all students regardless of background or social capital.” Career professionals and career services will need to consider access opportunities that connect clients and students to diverse mentors and professional connections that look like them. This is, and will continue to be, an important component in the work to increase equity and access for diverse candidates, especially BIPOC identifying persons.

Tech and Virtual Capabilities

In 4IR, career professionals will experience the need for increased understanding of virtual recruiting, hiring and workplace trends, and vastly different needs of employees and career services clients/students to navigate the virtual space. The rapidly rising virtual and digital world of work has already begun and was pushed faster and farther when “In March 2020, thousands of companies became ‘remote employers’ due to the COVID-19 pandemic. As a result, employers have turned more frequently to the use of technology to operate their businesses. This includes the use of artificial intelligence (AI) in the recruitment and screening of applicants for employment” (Hlavac & Easterly, 2020, p. 4). Hirschi’s predictions in 2018 are that much more relevant and timelier today, charging career practitioners to “see this as a call to action to more readily develop and integrate online-and computer-assisted career interventions into their practices and to partner with researchers to evaluate the effectiveness of such approaches” (p.201).

The advancement of technology and the digital world have already impacted both the work of career practitioners and the education system, where educators and career professionals have been called to adapt traditional counseling, coaching, education and learning practices to align with virtual capabilities. In 2011, Christensen and Eyring noted that “Now innovation is disrupting the status quo. For the first time since the introduction of the printed textbook, there is a new, much less expensive technology for educating students: online learning” (p. xxiii). Then,

in 2018, Hirschi highlighted that “Digital career support could be offered in the form of online self-assessment or video-based online counseling, with career information delivered through video or virtual reality. However, there is also considerable potential to design online career guidance systems that capitalize on the advances of artificial intelligence and the increasing amount of available data on people’s careers” (p. 201). And, in 2020, Chan further emphasizes the impact of technology by highlighting that “Something that really stands out now is having the ability to be adept at remote and virtual work. We did not actually know how important this skill was six months ago. Now it is something that is a minimum required skill, in which candidates can utilize virtual productivity technologies, know how to be self-motivated and productive working remotely, and have effective communication skills as a remote worker” (Leard, 2020). Over the last decade, and more specifically over the last year, rapid advances in technology have impacted the world of work and career services, and this trend (and speed) is set to continue.

Tech skills and virtual capabilities will be necessary for workers in 4IR. Chan remarks that “To create more flexible, productive work environments, employers want candidates who are independent, mature professionals, who can really navigate and thrive in the complexities of virtual work” (Leard, 2020). Clients and students, as well as career professionals, who “opt-out” of digitized resources, digital networks and tech skill-building risk falling behind, and career services has a role to play in advocating to address issues of tech and digital access that further the equity divide.

Self-Driven Career Management

The 2019 U.S. Bureau of Labor Statistics survey found that, on average, individuals will hold 12 jobs in their lifetime. With increases in the number of jobs held, the tenure at each job is on the decline and is anticipated to continue to decline in 4IR to as low as 12 months or lower. The 4IR also brings an anticipated increase in freelance and gig work where traditional “tenure” will continue to be redefined. This new work landscape faced with many, if not continuous, career transitions and decisions requires that clients and students become increasingly self-driven in managing their careers.

Individuals will need a stronger understanding of self—values, interests, strengths, skills, and aptitudes—as well as the ability to articulate, through stories, the impact of past experiences connected to the current and future needs of the organization, employer, or customer/client. Everyone in the 4IR world of work will need career management skills and capabilities in digital systems navigation, opportunity identification, complex information and process management, and decision-making.

In a work landscape that calls for clients to be self-driven managers of their own career development and transitions, career services will need to increasingly include:

- holistic self-exploration resulting in robust self-knowledge
- emphasis on and applied practices of professional, impact-oriented storytelling
- education and strategies in opportunity and relationship management
- systems of feedback and accountability

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- skill-building in decision-making and change management
 - practices in self-care and work-life management

To meet the changing needs that clients and students face in 4IR, Hirschi (2018) draws from career theory and research, positioning that “to address these issues, the protean (Hall, 1996, 2004) and boundaryless (Arthur, 2014; Arthur & Rousseau, 1996) career models, social cognitive career theory (SCCT; Lent & Brown, 2013; Lent, Brown, & Hackett, 1994), career construction and life design (Savickas, 2013; Savickas et al., 2009), and the psychology of working theory (PWT; Blustein, 2006; Duffy, Blustein, Diemer, & Austin, 2016) seem particularly promising” (p. 195). Additionally, the CareerCycles framework (Franklin, 2015; Zikic & Franklin, 2010) is a model emphasizing narrative practice, storytelling, community, and conversation directly aligning with the current and emerging needs faced by career professionals.

Final Thoughts and Reflections

The change brought on by 4IR will be widely felt by career professionals, clients, and students, and will alter how we work and how we approach career and professional development. Reflection and curiosity questions allow for openness to learning, new possibilities, and not getting stuck in current (or old) ways of thinking and doing. Career professionals might ask themselves and reflect on the following questions as they assess, re-invent, and invent for 4IR:

- What are my/our current practices, services, and offerings?
- What themes are emerging in my work with clients and/or students?
- What are the gaps between my/our current practices (frameworks, skills, capabilities) and services, and what is currently needed or will be needed next?
- What ideas or plans do I/we have to bridge the gaps?
- How is everyone included in these ideas? Have I considered the experiences and needs of underrepresented clients and students?
- What will I/we try first? How will we take initial action?

The same needs of clients and students to be resilient, innovative, creative, flexible, and open to change apply to career professionals. To thrive in 4IR, all career professionals will need to think and learn forward; continuing to invest in professional communities and systems of feedback; take risks and try new approaches, ideate, and iterate; and actively listen to the needs of the clients and students they serve.

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CHAPTER 10: WHAT COLOR IS YOUR PARACHUTE AND BEYOND: CAREER COACHING FUTURE-READY CLIENTS, DISRUPTING THE COST-QUALITY-ACCESS TRIANGLE AND DEVELOPING HEROICg MINDSETS FOR THE FOURTH INDUSTRIAL REVOLUTION

By Rich Feller

What Color is Your Parachute (Bolles, 1972) is immediately associated with lifework planning and shifting vocational guidance to life design. The fourth industrial revolution (4IR; Schwab, 2016) is code for expecting accelerated and profound systemic change. Connecting these two concepts is key to preparing clients and learners to be future-ready. Honoring Bolles' everlasting influence reminds me how one person, innovation, or mindset can advance an industry seeking to provide higher quality inputs and more efficient outcomes. This article proposes that to prepare future-ready clients (and learners), career coaches are encouraged to (a) look beyond traditional career choice and stage theory, (b) develop key trend sources (c), promote innovation that disrupts the Cost–Quality–Access Triangle, and (d) develop client HEROICg (Feller, 2019) mindsets (Hope, self-Effacing, Resilient, Optimistic, Intentional exploration, Clarity and Curiosity, growth not fixed) to navigate a lifetime of transitions in the 4IR.

As one of Bolles' early students, my “flower,” *Rich Feller's Flower* (Bolles, 2021), appears within annual editions of his seminal book, which is celebrating its 50th anniversary. As the world's most popular and all-time bestselling career handbook, it is also listed as one of *Times's* all-time 100 best nonfiction books. Bolles' unconventional and creative focus on self-inventory, articulation of achievements and transferrable skills stories, and job search informational research changed how well-trained career specialists practice. What if Dick Bolles had *not* applied his natural aptitudes to move past “test and tell” thinking to “holistic career development”? Reflective answers can lead readers to evaluate their readiness for innovation, assumptions about “interest-only assessment,” job-list matching models, and one-to-one face-to-face interventions as the most rewarding way to use their many skills.

In One Word: Parachute

Feller and Vasos' (2017) celebration video documented Bolles' impact and illustrated how *Parachute* introduced life design principles and advanced career work as the 4IR evolves. Bolles' passing invites others to continue his legacy and move career work beyond the COVID-19 pandemic. Fortunately, Katherine Brooks' research about meaningful work and career success, keen sense of job search techniques, and appreciation for the complexity of career mobility now updates Bolles' annual editions with a fresh lens.

His(story): Beyond Tradition to Meet Unmet Needs

Monitoring career work trends, I am aware that this review of career development is my his(story) or story constructed after 40 years as a researcher, counselor educator, consultant, and program developer. *Employment and Career Development in a World of Change: What Is Ahead for the Next Twenty-five Years?* (Feller, 1991) offers some trends, challenges, and opportunities that I proposed 31 years ago. Proposals to this journal's theme of "how we will work in the future" is a risk, an honor, and a welcomed professional opportunity, considering the wonderful stable of its authors.

Restless with traditional theory, I try to maintain a beginner's mind. I am grateful to have gained from Born Free's (Hansen, 1980) curriculum rollout, David Tiedeman's (1961) choice capacity research and mentoring, and Gilligan's (1982) insight about ethics of care and the value of relational connections. My training includes instruction and supervision from Carl Rogers and Albert Ellis, among other thoughtful leaders.

Having observed misguidance from interest-only assessment (McCoy et al., 2020), I question dominant career choice theory and suggest exposure to interest areas without aptitude feedback exaggerates a social-justice issue. Life stage theory seems punitive and incomplete when *The 100-Year Life* (Gratton & Scott, 2016), 60-year curricula (Lambert, 2019), and longevity premium (Butler, 2008) are appreciated. With majority White, male, middle class, and college student data driving dominant theory, Dey's (2020) position that traditional theories "may no longer work" is instructive. His assertion that career work needs to embrace transformative connections, immersive experiences, and life design principles is worthy if supported with staff buy-in, support, and re-training. Kaplan's career revival (Busteed, 2020) proposes industry and role-specific advisers, rigorous and engaging online services, and opportunities for students to achieve an industry credential or skill.

Gottfredson's (2002) notion of circumscription parallels increasing attention to female and non-White career researchers looking beyond the grand narrative that career opportunities are available simply by obtaining the "right education." Appreciating complexity, maximizing chance, growing comfortable with uncertainty, remaining open-minded within Pryor and Bright's chaos theory (2011), and empowering clients to fit work into their lives through construction theory (Savickas, 2019) are pushing career work forward. In many ways these models reinforce Bolles' beliefs about human potential, creativity, untapped talent, and faith.

Scanning Trend Data Sources: Clues to "Future-Ready for What?"

To say that work, learning, and well-being are shaped by globalization, technology, and automation is old news. To say that work needs to be rebuilt (Bluestein, 2019) and more humane (Merisotis, 2020) is an understatement, as Schwartz's *Work Disrupted* (2021) comprehensively explains the accelerated speed of the change ahead. To suggest that automation might revolutionize our relationship with work and usher in a more sustainable and equitable future is worth exploring (Suzman, 2021), even as Smith (2021) describes the struggles of seemingly disposable workers doing indispensable jobs that few would exalt. Developing access to varied trend sources creates a "positive uncertainty" (Gelatt, 1989) lens when evaluating preparation and

readiness routes to jobs, well-being, and the “good life” (Leider & Shapiro, 2012) and purposeful aging (Leider & Shapiro, 2021).

Policy and structures to absorb displaced workers and youth in need of “steppingstone” entry jobs to document transferrable skills are needed greatly. Supporting those experiencing layoffs who say, “I became an engineer because my brother did, and now I’m laid off at 45. I don’t want to go back,” and “How do I retrain after 15 years in a job and then poof, it’s evaporated?” demands a career coach able to track possibilities and advocate for those without a voice.

Constantly inventing new jobs and providing on-demand training is an ideal social goal for “knowledge nomads and the nervously employed” (Feller & Whichard, 2005, p. xv) whose value proposition is connected to agility and innovation. The needs of the “useless class” (Harari, 2019) struggling against irrelevance and exploitation will expand government’s role. Harari wonders “whether the average human would have the emotional stamina necessary for a life of such endless upheavals” (2019, p. 33). While scenarios of future work can be useful, career coaches best help clients in seeking clues about what the job market will offer and its requirements.

To understand that lifelong learning has failed to provide “as-you-need-it” deliverable education, and that the education system is poorly equipped to educate workers for “long life learning” (Weise, 2020, p.5) requires exposing structural issues needing innovation. Knowing that work for many is where the computer or smartphone resides is important. Understanding the plight of essential workers who work through handshakes and inches from risk is equally valuable.

As a student of the World Future Society, scanning insights and possible scenarios has broadened my lens to empathize with “what’s next” possibilities (Feller & Peila-Shuster, 2018). I suggest that career coaches need to develop an “informal college” consisting of key influencers, sites that report and aggregate trend data, and sources to filter “information anxiety” (Wurman, 1989). Innovation, technological development, and the capacity for the economy to adapt to change provide the most common trends to job creation and prosperity.

Translating Trends into Practice

The World Economic Forum’s seminal 2016 report (Schwab) brought attention to large, independent data sources and the importance of identifying clues critical to global workforce preparation. Their *Strategic Intelligence* platform (World Economic Forum, 2021) maximizes data inputs and expert systems to create relationship maps of forces driving transformation.

Reports such as *Future Skills for the 2020s* (Global Education Futures et al., 2020) suggest skills to build a thriving future include collaboration, adaption and transformation, enhanced future-orientations and technology tools, and embodiment of the well-being of people and the planet as our primary purpose. They propose four skill groups to be increasingly demanded in the 2020s: (a) new technical skills to prepare for a new wave of 4IR, (b) basic skills that increase human adaptability, future-readiness, and proactive behavior, (c) human skills that increase personal and collective resilience and productivity, and (d) green and universal well-being skills that can serve the thriving future community and civilization (p.160).

Selingo and Sigelman (2020), in *Good Jobs in Bad Times*, connect career coaches to Glassdoor's exceptional aptitude to scan, synthesize, and influence policy and language about career preparation. They suggest a permanent shift to online courses, student demand for graduation outcomes, and the power of three skill areas—human skills, digital building blocks, and business enablers—are powerful insights (p.30).

Skills Required (Emsi, 2020) captures the surge in demand and preference for short-term, non-degree micro credentials that offer work-relevant skills. *LinkedIn Learning* (Van Nuys, 2019) uses its vast data analytics to produce coach-friendly language, reports, and crosswalks to on-demand online training. Its connection to top soft and hard skills proves useful in building on-demand coach credibility. Knowing the top five soft skills of creativity, persuasion, collaboration, adaptability, and emotional intelligence is like having a research team in one's ear. Top 10 in-demand hard skills such as blockchain, cloud computing, analytical reasoning, artificial intelligence, user experience design, business analytics, affiliate marketing, sales, scientific computing, and video production will take most career counselors to a dictionary. The fast-changing work landscape demands that coaches quickly access technical job language and sourcing to stay current.

Influencers like Dan Schawbel's (2021) annual workplace forecasts provide easy-to-explain and aggregated insights from over 450 primary and secondary sources. He and others serve as e-tutors as aggregated data reports are needed to complement local labor market information and define what future-ready means. Once career coaches have a manageable set of sources, comfort with ambiguity becomes necessary to convert possibility to client action.

New Opportunities: Innovation and Disrupting the Cost–Quality–Access Triangle

Assessing client opportunities requires effort that may challenge favorite interventions. Changing career coaching practice can tax comfort levels as norms change. As technology's ubiquity and rapid change rate reshapes career choices, would it not also impact career work? New skill and role taxonomies bring stress into sessions if career coaches fail to keep current. This doubles the pressure on coaches working to stay current on career issues while facing increasing complex mental health issues.

Accountability questions about service costs can disturb individual routines. Evaluation questions about the quality and depth of career work can suggest disrespect for significant coach effort. Data requests about access numbers can be unsettling. Supervisor questions about client outcomes can create defensiveness as limited resources chase growing demands. The relationship among cost, quality, and access is complex and defines the factors shaping opportunity.

Responding with integrity requires identifying barriers that limit coaches from doing their best quality work, at scale with efficiency. As social and economic changes grow, opportunities for career work innovation will be embraced and seen as a threat. Historically, new models of career work evolve within 20 to 30 cycles, which parallels social and economic disruption (Dey, 2020). Support to staff is key before change will be embraced at a timely pace to remain durable and sustainable (Leard, 2020).

Entering the 4IR, career resources are stable at best. Within every organization and educational institution, setting budgets and staffing is challenged. Social justice issues, access outcomes, and elevated awareness to poverty's impact on learning, health, and longevity put delivery systems under review. Dick Bolles' own career change led him to review traditional job search methods. It led to his now universally accepted system, which took time to be fully embraced and sustainable.

Disrupting the Cost–Quality–Access Triangle

COVID-19's consequences have accelerated questions previously percolating. Innovation from remoteness, distance, and self-isolation created unexpected forms of collaboration and technological efficiency. As a result, career work is being examined to reduce its costs. Pressure to increase its quality and holistic lens grows. Expanding access to more clients is asked of any offering.

While the three factors of cost, quality, and access compete for the career coaches and organizational resources, career work can meet all three demands by increasing six elements.



Integrating more gamification can increase engagement and call upon the wisdom, resources, and feedback within peer-to-peer support. Maximizing technology's assets can reduce duplication and redundancy and organize on-demand client dashboards. Increasing self-directed activities

maximizes client time and can tap internal motivation. It builds on readiness to build muscle memory and accelerate client outcomes. Mentoring that provides “privileged information,” and experiential/immersion experiences bring the hands, mind, and machines together. Examples of each of these six elements are being created by entrepreneurs, innovators, and academics with insights from various disciplines (Feller, 2019). Career coaches embracing innovation to disrupt the cost, quality, and access barriers and to provide the six elements within the triangle hold great potential of disrupting career work.

HEROICg Mindset: Chaos Insurance and Success Metrics

As the 4IR creates disruption, will career coaches need to adapt their work? What metrics will help the client, coach, and funding sources prize career coaching, and efforts to build healthy habits, personal, and performance goals? Will success include connecting to capability partners, providing social support, and building sustainable systems? While the Conference Board (Abel, & Ray, 2020) reports little innovation in evaluation and assessment of coaching’s impact, clients that develop a HEROICg mindset (Feller, 2019 July) can access career insurance against labor market, social and personal chaos.

One evidence-based platform to deliver such client outcomes comes from Franklin (2014) and Franklin and Feller’s (2017, 2021) HEROICg Narrative Assessment System. It integrates holistic development, stimulates critical thinking, and organizes safe and structured life story clarifications as preparation for intentional exploration and small action steps. With affirmative peer feedback and resources, clients can enter a full *Who You Are Matters!* (Franklin & Feller, 2014) platform to use narrative assessment (Franklin et al, 2014, 2015) for support and for self-directed and sustainable activities. Serving remote and face-to-face teams to lead without authority, and personal and career growth, individuals and organizational clients are inspired to navigate a lifetime of transitions.

Chaos Insurance

Machine learning and robots can change almost every line of work for teams and individuals. Career insurance to assist with career change is of increasing value because workers and learners should be concerned about “a shift of authority from humans to algorithms” (Harari, 2019, p.44). Suggestions for food choices and dating possibilities result from billions of neurons calculating probabilities in seconds. This human intuition is pattern recognition sharpened by data scientists (of which my son is one).

Utopian views suggest automation will continue to generate new jobs and prosperity for all. The industrial revolution has seen that for every job lost to a machine, one new job was created, and the average standard of living has increased dramatically (Woirol, 1996). Machine learning is a wild card and artificial intelligence is beginning to outperform humans and understand human emotions (Harari, 2016), p.2). Dystopia sees great suffering and billions of workers becoming economically redundant. The more computers understand the biochemical mechanisms that underpin human emotions, desires, and choices, the better computers can become in analyzing human behavior, predicting human decisions, and replacing human drivers, bankers and lawyers

(Harari, 2019). Harari suggests we might get the worst of both views, suffering simultaneously from high unemployment and a shortage of skilled labor.

Career specialists could advocate for governments to slow down automation or increase economic entrepreneurialships. Expanding training subsidies and social support wraparounds to help workers repeatedly reinvent themselves can help offer balance. In all cases, psychological flexibility and finding psychological safety become life skills needed to adapt to chaos.

Overcoming silent conversations in a client's head (Kriss, 2021) is key to constructing enriched lives, work, and relationships. Helping clients articulate their "hidden assets" and access feedback to challenge "blind spots" requires clarifying intentions and developing a client's voice to self-advocate. Without this, any mindset is less sustainable. Clients can be influenced greatly by their motivation to learn, their adaptability, and their awareness of changing identities in meeting purposeful commitments, if not relevant paid work. As clients develop a HEROICg mindset (Feller, 2017, 2019), this greatly enhances confidence as change becomes constant.

Assessing Success: HEROICg Mindset

All client change is about learning and adaptation. Normal developmental change, cultural and social trends, and economic shifts create excitement and anxiety. Many clients are reimagining notions of jobs, work definitions, and employment's influence on identity (Feller & Chapman, 2018). Such adjustments can create dissonance and stress. Encouraging clients to adopt a mindset for moving forward with calm, balance, and intentionality is a profound goal.

Perceptions of automation's influence can greatly shape how clients define and navigate transitions. With such uncertainty, helping clients develop a HEROIC mindset supports their ability to learn, adapt, and welcome opportunities (Feller, 2017). By assessing the HEROIC mindset, clients can learn to draw upon psychological capital (Luthens et al., 2015) and to move forward intentionally with clarity and curiosity, regardless of what confronts them. As careers undergo cycles of instability, a HEROICg (Feller, 2019) mindset now suggests seven elements practitioners can assess within clients:

- **Hope (H)** occurs not only in difficult moments but also as a thinking process to pursue goals actively. Hope brings together a client's will (a sense of investment and energy), and way (the resources used to generate viable avenues or pathways to finding purpose in work).
- **Self-Efficacy (E)** is a client's sense of "I can," where the person trusts their own ability to organize and execute a course of action to manage a job loss, a transition, or a return to purposeful work commitments.
- **Resilience (R)** is crucial to successful navigation of the stress and adversity brought about by change. Resilience results from how clients define, reframe, and construct meaning from events. Rigid or habitual self-defeating thinking limits the ability to adapt and move ahead. Flexibility, objective thinking, and rational explanation of setbacks increase adaptability and acceptance of change.

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- **Optimism (O)** is the client's ability to seek solutions and see the upside of things gone wrong, and thus, reducing the gap between present and future aspirations. Not personalizing or catastrophizing failure, the client adapts and self-motivates rather than adopting helplessness. Believing that (a) good events have a permanent cause, (b) causes of bad events are temporary, and (c) denying universal explanations for failure expands energy and opportunities.
 - **Intentional Exploration (I)** is looking for positive clues, welcoming planned and unplanned opportunities, and taking inspired action to grow. These activities keep clients engaged and help broaden, build, and test possibilities.
 - **Clarity and Curiosity (C)** are clear intentions; acting on purposeful commitments creates focus, reduces distractions, and maximizes energy. Being clear about internal motivation makes acting intentionally, with integrity and curiosity, easier. Curiosity is a readiness and openness to spark the imagination and willingness to explore possibilities.
 - **Growth not Fixed (g)** has been added to the original set of HEROIC elements. This confirms a belief that one can only know and do what one has learned. Appreciating Dwecks' (2006) coining of the terms "growth and fixed mindsets," to describe the underlying beliefs about learning to perform, added evidence that the "g" is essential to a HEROIC mindset. A growth mindset confronts the globalization and finite evaluation that one "can't." Reframing "can't" with "yet" allows for cultivation by focused practice and behavior change. The HEROICg mindset is critical to helping clients adapt within personal, social, and economic chaos.

Complementary to developing a strong HEROICg mindset is helping clients overcome silent conversations, access their motivation to learn, and adapt and to be self-aware. With the career insurance that HEROICg mindset can provide, being able to navigate change, find social support and capability partners, maintain motivation to learn, and develop skills empowers clients. As clients stretch perceptions and aspirations, overcome internal barriers, and target transitions to purposeful and meaningful life roles, career coaching's value gains appeal. This is the promise of developing a HEROICg mindset.

Parachutes Opened: A Summary

Fortunate to have had Dick Bolles as a mentor, I watched him significantly shape career work across the world. His *Parachute* identified unmet needs, challenged job search assumptions, and spoke to innovation as society and the economy changed. He met resistance and garnered support by providing better quality, more efficient career work at scale, and helping the masses see that career development could make their future better. Kate Brooks will continue his legacy wonderfully well within the 4IR. Useful observations about creating future-ready clients build on *Parachute's* work and will take time, coach buy-in, and sensitivity to change theory.

With a beginner's mind to see unmet needs and with 40 years of experience, I encourage four proposals to support career coaches as the profession moves forward: (a) look beyond traditional career choice and stage theory, (b) develop key trend sources to evaluate the perennial problem of "where are the future jobs/opportunities," (c) acknowledge their comfort level as innovation

works to disrupt the Cost–Quality–Access Triangle, and (c) develop client HEROICg mindsets as career insurance for the 4IR.

Optimistic about career coaches' desire to put clients first, I remain humble and optimistic about innovation's potential to deliver systemic change. I am reminded that human potential grows through mastery, and I believe that career coaches and clients will embrace efforts that can improve their future. To the degree that this article offers support and direction to disrupt the Cost–Quality–Access Triangle and promotes development of HEROICg mindsets, I am confident about opportunities within the 4IR.

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